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I.

THE study of religion contributes in two different ways to the development of philosophy. One of these is by a movement arising within the organized faiths themselves. The faithful attempt to understand better the dogmas which they hold, to define them in the terms of contemporary science and thought, to explain their nature, and to defend them against the objections of unbelievers. *Fides quaerit intellectum.* Such a 'religious philosophy,' while it has varied in productivity, has never been entirely inactive in France since the time when Bossuet, Fénelon, and Malebranche made their eloquent translations of the principles of the Christian faith into the language of Cartesian rationalism. It produced the long-lived movement of 'Liberal Protestantism'; and after a period of comparative inaction, it has recently become remarkably productive again in the writings of MM. Blondel, Laberthonnière, Le Roy, and Bureau, an analysis of which was given in these pages not long since.[2] This activity has continued through the present year, and now seems to have absorbed the discussions of pragmatism, in which philosophers, properly so called, are apparently not so interested as before.[3]

But religion also furnishes material for philosophy in another way. It is considered no longer from within, but from without;

[1] Translated from the French by Dr. E. H. Hollands.

[2] "Philosophy in France," PHILOSOPHICAL REVIEW, May, 1908.

[3] *Cf.* Albert Leclère, *Pragmatisme, Modernisme, Protestantisme,* which censures all three severely in the name of Catholic orthodoxy. It is true that at the same time pragmatism was attacked with equal severity, and from the opposite side, in the *Anti-pragmatisme* of M. Schinz.

as a social phenomenon, to be studied by historical and critical methods, and indeed one of the first importance, since it is the most ancient and most general product of collective thought. It is analyzed, therefore, quite objectively, just as a system of legal institutions or of economic relations would be. In theory at least, the analyst omits entirely any estimation of the truth or moral value of the beliefs and rites which he studies. His special aim is to discover, by a study of its simplest forms, what all forms of religion have in common, and thus to find out what is specific and irreducible in those extremely complex products, our cults and theologies as they now exist. This 'philosophy of religions' has been very active in France for the last two years, and has already produced some noteworthy works, the chief characteristics of which I will attempt to indicate.

A book by M. Émile Boutroux, *Science et Religion dans la philosophie contemporaine*, has been published in the *Bibliothèque de philosophie scientifique*, edited by Dr. Le Bon. Even this fact is a characteristic sympton of the times. But twenty years earlier, this title and subtitle would have seemed incompatible. To the public, and especially the scientific public, religion seemed something absolutely foreign to science. Not that there were no scientists of religious disposition at that time, for some, like Pasteur, were faithful adherents of their church. But these two orders of ideas and sentiments were regarded as being quite as independent of each other as a mathematical theory and an opinion in politics. This state of things was the result of the positivistic tendency, of theories of the unknowable, and especially, perhaps, of the extreme specialization which was then general among scientists.

Ernest Bersot, the keen and subtle psychologist, who was one of the most influential principals of the *École Normale*, invented a name for this state of mind which is still celebrated. In speaking of philosophers who thus divided their intellectual life, he said that they had 'water-tight compartments' in their mind. It seems to me certain that the system of 'water-tight compartments' has had its day. At present scientific method claims not to be arrested by any bounds, and to apply to the criticism of the scriptures, to the origin and history of religions, and to

their relations with the other social phenomena in the midst of which they appear. Religion, for its part, cannot give up the assertion of its supremacy, in the name of which it claims the right to judge all human life, and consequently science as part of that life. Accordingly, the Catholic faculties are at pains to have their own specialists, and to give their pupils a complete course of advanced instruction, without recourse to that provided by the state. On several occasions prohibitions have even been issued by the Catholic authorities, forbidding young ecclesiastics, with more or less rigor, to attend courses in the state universities. But, on the other hand, historians have at the same time been studying comparative religions and making theology. Two new chairs in the history of Christianity have recently been established at the Sorbonne, one for the origins and the middle ages, the other for modern times. At the *École des Hautes Études* (which is, so to speak, an annex of the Sorbonne) separate courses are being given this year on the religion of savage peoples, on primitive religions, on the religions of the peoples of Europe, of the Far East, of Assyria, of India, of Greece and of Rome, of Mexico, and of Egypt; on Judaism, Mohammedanism, Christianity (four courses), the history of dogma, the history of canon law, and the psychology of religion.

I return to M. Boutroux's book, which is interesting in two connections. It has, in the first place, an interest of the historical kind, as one might expect from its author, who analyzes and compares a series of doctrines which until now had not been thus connected, but all of which are alike in the fact that they define an attitude in regard to the relations of science with religion. Here belong August Comte and his religion of humanity, Herbert Spencer and his 'reconciliation' by the theory of the Unknowable, Haeckel and his monism, and finally 'psychologism' and 'sociologism,' as we may call those theories which attempt to *explain* religion by reducing it to the natural interplay of ideas and of sentiments, whether individual or collective. All of the members of this first group are naturalistic in tendency, and all save Spencer subordinate religion more or less completely to science. A second and contrasting group is spiritualistic. To it belong the

theories of Ritschl and of Wilhelm Herrmann, that of W. James concerning the "religious experience," and that of those critics of science who have striven to show its "bankruptcy," to reduce it to an arbitrary construction or to a mere collection of practical recipes, and thus to confine it within such bounds that it would have no power to pass judgment on religious phenomena. Here also belongs the philosophy of action or pragmatism, which tries to restore concord between reason and faith by asking mutual sacrifices of each, demanding of reason that it cease to make its knowledge an image of reality, and of faith that it cease to see in its dogmas a revelation of an order of existent objects, and reduce them to symbolic definitions of the moral attitudes which the believer ought to take.

The critical point of view of M. Boutroux's work is however equally as interesting as his historical discussion. He not only sets these doctrines forth, but he also weighs them, indicates their weaknesses, and draws from them a general conclusion. The facts seem to him to show that religion and science are two indestructible forms of thought, or, to speak more correctly, two social realities. "We have to do here not with two concepts, but with two beings, each of which, according to the Spinozistic definition of existence, tends to persevere in its being." And this claim is legitimate in both cases, for each corresponds to an aspect of things which no conceivable transformation of human thought will ever be able to eliminate. On the one side we find that systematization of phenomena from an impersonal point of view which constitutes science; a striving towards unity and even towards absolute identity, which is realized by the abolition of all differences and by the creation of an abstract, general and uniform scheme of things, from which in theory at least nothing escapes, whatever lacunæ in it may as yet actually remain. Contrasted with this are the sentiment of moral personality, in so far as it is realized by an individual being, and hence gives value to his individuality, and the sentiment of social ends in so far as the family, the nation, or mankind are regarded as beings whose development is a *good*, and whose fate is even more important than the truth of some theorem. Science itself pre-

sents these two aspects. The first is obvious in its content; but by its existence it presents itself also as a value which one endorses by an act of faith. All these beliefs concerning the meaning of human life make up the essence of religion. Religion, therefore, is still viable, but on condition that it pass through a certain ideal transformation. It must purify its dogmas, which are capable of an enlargement which would remove from them all that could be an offense to reason or to positive science. It must preserve its rites and its activities, but vivify them by a new spirit. And, most of all, it must admit universal tolerance, or, to speak more correctly, it must transform the very variety of beliefs itself into a religious ideal. Unity is the proper end of reason and science.[1] The ideal of sentiment and of faith should be a diversity which has no limits. "The only way in which the finite can imitate the infinite is by diversifying itself to infinity." The religion of the future will therefore have as its chief characteristic the disappearance of that conformity which has for so long seemed to be its most essential aspiration; and by that surrender it will be reconciled with science, which will be the sole heir of that ideal of similarity and ὁμόνοια which it alone can effectively realize.

II.

The book of M. Boutroux belongs to the second of the two divisions, necessarily somewhat abrupt, indicated at the beginning of this article; but it is obvious that in its concern to estimate the legitimacy of faith, to answer 'yes' or 'no' to the demands of the religiously minded, it is closely akin to the first division. For M. Boutroux, as for the apologists and their adversaries, the fundamental problem is to pass judgment on a debate still in suspense. It is true that he is not to be identified with either party, but he is distinguished from them especially by the strength of his thought, by his abundant knowledge of philosophy, and by his serene impartiality.[2]

[1]Compare the works in scientific philosophy, mentioned at the close of this article, which arrive at the same conclusions.

[2]A meeting of the Philosophical Society was devoted to a discussion of M. Boutroux's book, in which MM. Le Roy, Lachelier, Durkheim, Darlu, and Father Laberthonnière took part, before a large audience of members. M. Georges

An entirely different spirit pervades the publications of M. Durkheim and of his school. Every judgment of value is deliberately excluded from their study of religion, which they regard as a fact to be known, and to be explained, as social institutions are explained, by the conditions in the midst of which it has developed, and by the concatenation of its historic forms. In two articles published in the *Revue philosophique*, M. Durkheim criticises "the classical theories of the origin of religious thought."[1] These theories are *animism* and *naturism*. On the animistic theory, which is best represented by Tyler and Spencer, religion is in essence the belief in spirits, souls, genii, demons, which inhabit all things, and manifest themselves by material, biological or pathological phenomena, just as our own mind shows itself by the movements and actions of our body. This belief arises, it is said, from the observation of abnormal states, and especially of the dream, which primitive man interprets as a sortie from the body of an internal substance which is its 'double' or ghost.

The protagonists of naturism are Max Müller, Steinthal, Kühn, Schwartz, and Michel Bréal. According to them, the gods are natural phenomena or objects transfigured by language; *nomina, numina*. In Agni it is easy to recognize fire, in Ouranos the sky, in Zeus the lightning, in Apollo the sun. Beings thus designated become spirits analogous to those of men all the more easily because the forms of the language suggest their personification. The very form of the judgment, said Steinthal, makes its subject a personal being, anthropomorphizes it, makes the attribute a quality or a defect of this being, and the verb a designation of an act performed by it. Since nature to the primitive mind is marvelous, terrible, and beneficent all at once, the reciprocal

Sorel has published a long and interesting analysis of the same work, under the title: *La Religion d'aujourd'hui* (*Revue de métaphysique*, March and May, 1909). He compares it with much ingenuity with a great number of contemporary publications and articles, almost all either apologetic or anti-religious, from which he quotes abundantly. M. Georges Sorel is himself a thinker of considerable originality. He was formerly a governmental engineer for bridges and roads, but he has now devoted himself to philosophy and to the Party of Social Action. He is one of the leaders of that Catholic Socialism, a singular movement, which, while it is not precisely philosophical, has some affiliations with contemporary philosophy.

[1] January and February, 1909. These articles are drawn from a volume in preparation, *Les formes élémentaires de la pensée et de la vie religieuse*.

reactions of language and of nascent experience produce cults and mythologies, which are the most ancient form of religion.

Neither of these two hypotheses is tenable, according to M. Durkheim. Animism should explain how the notion of a human soul was formed, how souls become the objects of a cultus and were transformed into gods or demons, and how the undeniable nature-cult can be derived from this. The theory does not afford an entire explanation of any of these problems. It explains the belief in the soul by the idea of a 'double,' and this idea by dreams. But even admitting that dreaming is frequent among savages, which is not certain, it is very doubtful whether this would have been enough to produce such a strange hypothesis. Why did they not adopt the very simple explanation of believing themselves capable during sleep of seeing things at a distance? And, on the other hand, why were they not arrested by the fact that one often dreams of the past? However rudimentary a man's intelligence may be, he will hardly imagine that his 'double' has reascended the course of time. And how did it happen that the actors in these different imaginary scenes did not perceive that their 'doubles' had played irreconcilable rôles in them? No objectivity is possible on a basis so individual as this. Even if we suppose that the idea of the soul, and that of survival after death, were thus gained, this would not be enough to found a cult. A soul at liberty might indeed be useful or troublesome, just as a domestic animal may be; but it would lack *sacredness*, that original and unique characteristic which is the true mark of religion. It must be added that ancestor-worship, which on this hypothesis ought to be a mark of the most primitive civilizations, is on the contrary found in a much more developed form in China, Egypt, Greece, and Rome, than among the Australian tribes, which exhibit a much less advanced stage of development. Nor is the transition from the human soul to spirits of things one without difficulties. We have assured evidence for animals and plants being enrolled among sacred objects without taking on any anthropomorphic character. When the great forces of nature are deified they preserve the vestige of their animal or vegetable origin, as in the case of gods with the head of a crocodile,

of an ibis, or of a bull, instead of one of human form. Indeed, man rather thinks of himself as an animal descending from an animal, and retaining the essential nature of some species which he regards as his kindred; he did not therefore conceive that species in his own image. And to sum up, if the animistic theory were true, religion would be nothing from beginning to end save hallucination and dupery. But how, if this were the case, has it preserved such an extraordinary vitality throughout all the history of mankind?

These objections cannot be raised against naturism. The worship of stars and of the great cosmic forces is addressed to real objects. If this hypothesis were true, religion would be the first form of science. "The cult," said Tarde, who held this view, "was a domestication of the gods, at a period when the domestication of animals was still closely related to the cult." But the great naturistic theory is open to objections of another sort. If the first reason for religion was the desire to acquire power over things, how did it come about that it was not seen almost at once that prayers and rites did not succeed in this? Failures infinitely more numerous than successes would have soon caused men to abandon these inefficacious practices. And even if man had been sufficiently irrational not to heed the lesson of experience, how would he pass from such an exploitation of natural facts to the notion of the *sacred?* Primitive man is not astonished by natural phenomena; he finds them all 'natural,' since he is accustomed to them from childhood. Everything in nature takes place with regularity, and that which is regular in its appearance never strikes the imagination. The respectful fear of man in the presence of the infinite or of the starry heavens is a sentiment entirely modern. Among the ancients (who moreover did not believe in an infinite), the notion of nature is essentially that of an identical repetition. *Eadem sunt omnia semper.*

Both animism and naturism, then, efface what is characteristic in the religious mind; and when they have effaced it, they strive to find an approximate equivalent in facts of the psychological or of the cosmic order. But these reconstructions are beside the mark. Neither man, taken individually, nor nature, possess in

themselves that *supernatural* character which is the proper essence of religions. One more way is open, to look for it in the relations of men to one another and to that social organization of which they are a part.

Almost at the same time with these remarkable articles there appeared in the same review two studies which were animated by the same spirit, though arriving at slightly different conclusions: *La triple origine de l'idée de Dieu*, by M. Belot, and *L'idée de Dieu et le principe d'assimilation intellectuelle*, by the author of the present article.[1]

The article of M. Belot is essentially a critique of ideas. It shows that there are embraced in the notion which we call *God* three conceptions which are radically heterogeneous, in the most precise sense of the word, and which historical accidents have led us to juxtapose illogically under a single name. The first is that of the popular God, a product of the collective imagination. It is incarnated in personal gods, such as Jehovah or Jupiter. Whatever may be the difference between these, they all have the characteristic of being proper to a nation, and the center of its social life. God is father, chief, and often creator, "the God of Abraham, Isaac, and Jacob." The second of these conceptions is that of the intellectual God, the God "of philosophers and savants" which Pascal so justly opposed to that just described. The philosophic idea of the divine is so different from that which precedes that it is difficult to understand how it can be given the same name. The Demiurge of Plato and his Idea of the Good are a striking example of this duality. Yet in spite of this the confusion of the two ideas took place. It is especially present in Descartes and in the Cartesian theologians, in whom the real difference of the two ideas is shown only by the obscure and really insoluble question of how the metaphysical and the moral attributes may be reconciled. The third and last conception is that of the mystic God, directly perceived by the individual, and with whom one enters into relations only in the "religious

[1] I was acquainted with the article of M. Belot when I wrote my own, but those of M. Durkheim had not yet appeared, and he himself had not seen that of M. Belot, which was published first. This is an example of that convergence of interest which is not infrequently to be observed in the movement of philosophic ideas.

experience." It is evident that it has nothing in common with the Absolute of the philosophers, and the fact that it is not reducible to the popular idea is shown by the often disturbing difficulty which mystics have had in identifying the object of their internal revelation with the orthodox God of tradition and the Church. Under the name of God, therefore, we put together the most incompatible ideas. Habit and verbalism alone prevent our seeing this. "But since interest in the philosophy of religion is just now reviving, it seemed most of all important not to explain the errors of the past, if they were errors, but to prevent their recurrence. The first duty of the philosopher is that probity because of which, even if a real obscurity remains in the chaos of things, he tries at least to know precisely what he is saying."

My note on *L'idée de Dieu et le principe d' assimilation intellectuelle* is based on the same facts, but draws quite a different conclusion from them. I have tried to show that the fusion of heterogeneous elements of diverse origin, their coalescence, and then their more and more intimate union, is a general feature of the advance of human thought, generally ignored because of that evolutionistic prejudice which always expects to find what is simple at the outset of a process, and to see the multiple issuing from it by differentiation. Now while this is perhaps true in the case of living species, precisely the reverse is true of the development of language, that of rational ideas, and that of religious beliefs.[1] Aside from the syncretistic confusion denounced by M. Belot, a great number of other convergences could be pointed out in the history of religions. Such are the assimilation of the gods of the Egyptian pantheon, whose number diminished steadily, and approached unity; the assimilation of the Greek gods, and that of the Roman; the assimilation at Rome of the cults of foreign nations; the fusion in Christianity of the oriental with the classical tradition. Is it not the problem of the present moment how to assimilate the needs of science with those of religion? The effort of the spiritual life is directed towards the union of terms which at first were independent, and

[1]See as to language the book of M. Lévy-Bruhl, cited later.—My course of lectures this year was devoted to an exposition of this polygenetic origin, and later adaptation, of the ideas of reason.

their absorption into a final unity. "Whenever all things are conceived as issuing from unity, whether as in the theories of creation, or after the more subtle fashion of the evolutionists, doubtless it is the same want which is satisfied. The success of such theories has very little to do with realities of observation, for these realities are most often incompatible with the hypothesis. . . . But they are an expression of that tendency of the mind which projects symbolically into the past the inverted image of what it strives toward in the future."[1] The same thing is true of such old formulæ as *the* origin of language, or *the* origin of religions. If you look into the past, you will find *origins;* but if you wish to see their unity, you must look to the future.

III.

The science of religions has made still other contributions to philosophy during the past year, of which that now to be mentioned is the most original, and probably that which will be most fruitful in its results.

In a second article, this time published by the *Revue de métaphysique*, and entitled *Sociologie religieuse et théorie de la connaissance*, M. Durkheim outlines a plan for reform in epistemology, which would substitute for its dialectic and often verbal discussions the determination of positive problems, solutions of which can be reached, and replace 'philodoxy' by science, as Kant desired to do. This may be regarded as, so to speak, the philosophical manifesto of this new school, and doubtless it will mark a date in the history of logic.

It is known that man's most ancient conceptions of the world are of religious origin. Now these conceptions have not merely furnished matter for reflection to the mind; *they have contributed to the formation of the human mind itself*, for they have had a share in the making of those fundamental ideas and principles which at present determine the form of all our knowledge—time, space, causality, substance, personality.

Besides this, religion is an eminently social phenomenon, and the same thing must therefore also be true of the categories of

[1] *Revue philosophique*, 1909, I, 284.

the understanding and the *à priori* forms of knowledge. Time, for example, is not only the inner perception of the duration, or of the flow of conscious states. It is an already formed system of hours, days, weeks, months, and years, which imposes on our activity and on our thinking an impersonal setting or framework, inseparable from our civilization and the religious habits which it has acquired. Space appears in the first instance as divided and oriented on the model of the clans and families which make up the tribe. It is thus that the objective character of reason is to be explained. It belongs to social consciousness, not to individual. It is really, as men liked to call it at the beginning of the nineteenth century, impersonal Reason.

In this way the old debate between empiricism and rationalism is to be settled. The fundamental claim of the aprioristic school is that knowledge is made up of two kinds of elements, irreducible to each other, or of two orders of concepts, which are distinct and superposed. It holds that every man always partakes in a reason superior to his own, by which his own thinking is supported and nourished. And all this is true. On the other hand, empiricism maintains that there is no other source of knowledge save contact with realities, and that nature is the model after which our reason shapes itself. This is also true; for the principles of reason are derived from the constitution of society, and since the social kingdom is a kingdom of nature, differing from others only by its greater complexity, that which corresponds to the organization of society will correspond also to the laws of nature.

But while both rationalism and empiricism can be admitted as correct in their positive conclusions, neither of them is an adequate theory of knowledge. The empiricist believed that we need only to analyze our most customary experiences in order to see how habits of mind are produced by them which finally impose themselves on all our thinking. He therefore disregarded the results of that extremely complex historical elaboration which has slowly matured the laws of our thought through a sequence of forms, the vestiges of which are sometimes scarcely visible. The rationalist believed that he could develop all primary notions

from his own mind by a reflective study of his necessary judgments; and thus he also failed to see that these necessary judgments are mobile historical results, social products whose content cannot be entirely determined by reflection on individual thinking. Sociology, however, teaches us to regard the very first principles of our thought as realities partially unknown, having an existence of their own, and essential characteristics which may not be revealed by a first observation. It therefore proposes the historical study of the formation of the human intellect, in its connection with industrial and juridical development, as a field for positive investigation, in which a verbalistic philosophy may once more become a knowledge of realities.

A few days after this noteworthy programme there appeared in the same review an article by M. Hertz, which applied its suggested method to a point of detail, the difference between right and left, which is so firmly rooted in human thought. The origin of this difference, he argues, is not merely or even essentially physiological, but rather normative and religious.

But the finest illustration of the method proposed by M. Durkheim is the work of M. Lévy-Bruhl, *Les fonctions mentales dans les societés inférieures*. The fruitfulness of the positive and social point of view for the analysis of the human mind is shown there at its best, by the most precise and varied examples.

The fundamental idea of the book is as follows. Making still more emphatic the celebrated criticism which M. Ribot passed forty years ago on the psychology of "white, adult, and civilized" man, M. Lévy-Bruhl shows that the people of inferior civilizations not only do not judge as we do, but that they use entirely different categories, and that nothing is more inexact than that dictum of Spencer's, according to which "we must set out with the postulate that primitive ideas are natural and, under the conditions in which they occur, rational." So far is this from being the case, that primitive ideas are in many respects precisely opposed to our methods of reasoning. So, to speak more exactly, two modes of thought coexist among savage peoples; rational thinking such as our own, which however exists among them only in a rudimentary form, and another entirely different type of systematiza-

tion, of a *prelogical* character which M. Lévy-Bruhl describes by the phrase 'law of participation.' Its special characteristic is that the objects of its knowledge are neither limited nor individualized. The 'atomization' with which many contemporary philosophers reproach the human understanding is a vice unknown to the mental life of primitive man. Their ideas are *in globo*, affective, mystic, undefined. Things are always for them much more than they appear to be. Their sensible reality is only the sign, or, one might almost say, in the language of Jacob Boehme, the *signature*, of an occult being and of mystic powers—powers which may be identical in the most heterogeneous objects, and different in those which a logical mind would unite in a single class. Those objects which belong to the same mystical class, however different they may seem, are in reality the manifestations of the same essence, and they are therefore considered as identical in much the same way as we think of the symptoms of a disease, however varied they may be, as one. An example of this is the fact that the actual individual, the ancestral being which lives again in him, and the animal or vegetable species which is his totem, are regarded as only the accidents of one and the same reality which involves them all. Another example is the custom of a certain Californian tribe which once a year solemnly kills a buzzard in each of its villages, in the belief that it is always the same bird which is sacrificed, and that the birds killed in the several villages are only a single bird. Whence a second form of the law of participation, according to which the magic effects of objects belonging to the same mystical class are equivalent; and from this follow the principles, that 'like produces like,' and that 'the part is equivalent to the whole,' since it contains indivisibly the 'virtue' which is the only agent in things.—It should be added that the whole system formed by these different essences has the social organization of the tribe as its center, and forms a sort of analogous repetition of it, which reappears in all divisions of the universe. Animals, plants, stars, colors, regions of space, different actions all enter into the same system of relations, originally modelled after that of individual men, of families and of clans, which constitutes so to speak the single theme of cosmic

relations. For savage men, as the Italian proverb says, *tutto il mondo e fatto come à la nostra famiglia.* Because of this, that which seems to us radically multiple, individual, and determinate, to primitive man appears, on the contrary, as single and indistinguishable. The tribe participates in the nature of an animal species; each of its members in turn shares in a subordinate way in that of certain other animals, of certain plants, directions, diseases, and so on. Conversely, what seems alike to us, seems different to them. In a word, their system of general notions is so different from ours that their conclusions, although they follow quite naturally from their beliefs, often seem to us pure absurdities.

From this point of view M. Lévy-Bruhl shows in detail, and by numerous examples, how this prelogical type of mind expresses itself in languages and in systems of numeration. These two analyses are perhaps the most interesting and instructive portion of the work. He also shows that the religious ceremonies concerned with hunting, fishing, war, birth, initiation, sickness, death, and divination are applications of the same principles, or rather, to speak more exactly, effects of the same collective ideas. There is a sort of internal logic in this prelogical stage of mind which assists us to understand and connect the strangest rites and beliefs, once we have grasped the focal state of mind which controls all this mystical psychology. We can even rediscover the still living results of this prehistoric mode of thought in a great number of our present religious beliefs; and I believe that it is only the discretion of the author which has prevented him from giving examples of this. "The logical unity of the thinking subject, which most philosophers take as given, is a *desideratum*, not an actual fact. Even in our present society, ideas and combinations of ideas governed by the law of participation are far from having disappeared. . . . And if it is true that our mental processes are at the same time logical and prelogical, this throws new light upon the history of religious dogmas and of systems of philosophy." Even from this preliminary study one can see that many of the old problems are about to disappear, and that the dialectic method customary in epistemology is like

the scholastic fashion of explaining the physical world by combinations of the hot and the cold, of the dry and the moist

Thus far I have spoken only of works specifically philosophical in character. But one sees how closely they are connected with the whole movement of contemporary thought when one compares all the works in the sociology and history of religions which have been published during the last few months. Such a work as the *Évolution des Dogmes*, by M. Guignebert, is a striking evidence of this, since it is an historical study of social psychology even more than it is a history of the beliefs themselves.[1] The first part of the book analyzes the nature of dogma, the forms in which it becomes incarnate (canonical books and writings), and the elements which enter into its constitution (revelation, inspiration, tradition, interpretation). The second discusses the "life of dogma," its birth, its growth, its adaptation to pre-existing religious conditions and to the social environment in which it develops, and finally its dissolution and its death. The conclusion of the work, which is strongly fortified by facts, especially by those borrowed from the history of Christianity, is that a dogma reveals itself to the historian as the laborious and constantly changing creation of a human group; that is it essentially a social phenomenon, formed by the anonymous and unconscious collaboration of all the aspirations, desires, and impressions which the men of a given time and society experience in the way of religious feeling. But these dogmas are not created in isolation from one another. They express more and more perfectly a moral and psychological reality. There is a sort of religious progress, quite analogous to scientific progress, and evidenced by this connected series of dogmas. "From the point of view of an historian independent of any church, the creed which a liberal believer, such as Auguste Sabatier or Jean Réville, constructs out of his own consciousness as a guide to his individual religious life, has its profoundest roots in the fetichism of the savage. That is to say, man has raised himself, by a continuous transformation of his religious feelings, from the lowest form of religion to a conception of 'pure religion,' which is, in addition, as yet the rare possession of an elect few."

[1] This work was also published in the *Bibliothèque de philosophie scientifique*.

Works not precisely philosophical, but having a lively interest for the philosopher, and often broaching problems in his field, are so numerous that it is difficult to choose among them, and I will cite only a few to give an idea of the active work being done. The *Mélanges d' Histoires des Religions* is by MM. Hubert and Mauss, who belong to the school of M. Durkheim, and one of its chapters discusses the notion of time from the point of view already defined. *La Méthode dans l' Histoire des Religions*, by M. Georges Foucart, and the *Études de Mythologies et d' Histoire des Religions Antiques*, by M. Toutain, discuss in an interesting way the question of method, as it affects the principles by which mythology is to be explained. The *Orpheus* of M. Salomon Reinach is a curious manual of popularization, intended to spread among the public, in an attractive form, the principal results of modern criticism in the historical study of religion. The erudition of the book is somewhat mundane, and it has been a great success for the publishers. But it has also provoked a serious discussion of principles and methods in the *Bulletin de l' Union pour la Vérité*. The name of M. Salomon Reinach's critic lends a special interest to this controversy. He is the Abbé Loisy, at present professor at the College of France, whom the Catholic Church recently deprived of his functions as an ecclesiastic because of the unorthodox conclusions which he had reached as a result of his study of Christian origins.

IV.

But in spite of the rank which questions of this sort have taken in the philosophical world, one should not believe that they have checked the activity in the philosophy of the sciences which has gone on so energetically in recent years. This does not impress the public mind so strongly, because it is a sequel instead of a beginning, but the continuity of its labors is in its favor. Some months ago there was added to the course in the methodology of the sciences, instituted five years since at the Sorbonne, another chair in the history of the sciences in their connection with philosophy. Its occupant is M. Gaston Milhaud, formerly professor at the University of Montpellier, and the author of several valuable

works: *La Certitude logique, Le Positivisme, Les Origines de la science Grecque, La Pensée scientifique chez les Grecs et les Modernes.* The variations and different aspects of the idea of evolution have been studied by M. Le Dantec in his *La crise du transformisme* (lectures delivered in the Faculty of Sciences at Paris, and now collected into a volume), and also in a series of articles in the *Revue Scientifique*, the most important of which, as it seems to me, is that entitled "Transformisme et stabilite, une nouvelle loi physique de la transformation des espèces."[1] This subject has been a current topic of discussion since the centenary of Lamarck, which occasioned the writing of a fine general review of his work by M. Marcel Landrieu, and its publication by the Zoölogical Society of France. Several articles by M. Gaston Bonnier on the same subject have appeared in the *Nouvelle Revue*, especially one entitled "Les Evolutions de l'Evolution." The *Archiv für systematische Philosophie* also published in French an article by M. Henri Moreau, "Le sentiment intérieur et son rôle dans la psychologie de Lamarck," simultaneously with the appearance in the *Revue de philosophie* of an article entitled "Biologie et transformisme," by M. Driesch, the German vitalist whose name has been made popular in France by M. Bergson, and with the publication by the *Revue du Mois* of an essay by M. de Vries, "Transformisme et mutation." It would be impossible to enumerate all the reports and discussions dealing with this subject.

There is equal activity in the field of the physical sciences, and in that criticism of the general principles of science which is so intimately connected with the study of the great laws of physics.

M. Bernard Brunhes, a physicist, and director of the observatory at Puy de Dôme, has published a book of popular philosophy, *La Dégradation de l'Énergie*, which provoked some very penetrating criticism from M. Le Dantec in the *Revue philosophique*. M. Brunhes had taken an industrial and utilitarian point of view, one which makes this process easier of imaginative apprehension. M. Le Dantec regards such an anthropocentric explanation as a dangerous method, one which falsifies the conception of degra-

[1] *Revue Scientifique*, November 20, 1909.

dation of energy completely, and prevents us from grasping its real nature. To appreciate the import of this discussion it is necessary to know the sentiments which underlie it. M. Brunhes is a scientist who is friendly to religion, and he sees in the ideas of eternal conservation one of the causes of contemporary atheism. He does not conceal his antipathy for "that spirit of *à priori* affirmation which becomes intolerable in the theologians of monism when they presume to disdain theology." M. Le Dantec, on the contrary, is a positivist who dreads extremely the intervention in scientific problems of metaphysical, or even of moral, ideas. He especially protests against a philosophical attitude which seems to him disastrous. But the discussion has only begun and it is almost certain that it will go further. It may be hoped that in the end this notion, which is generally ill-understood, and which has often been distorted by philosophers who had a concrete intuition of it, as for example by Spencer, will be defined as clearly as it should be, and that all the value for questions both within and beyond the limits of science which it implicitly contains will be brought out.

The subject of M. Myerson's remarkable work, *Identité et Réalité*, is closely related to the foregoing topic. This book shows its author's rare knowledge of the history of the sciences, and I would praise its thought more highly were I not afraid of showing partiality to conclusions so similar to my own. M. Meyerson verifies the guiding thought of the book by a close analysis of the notions of time, cause, law, inertia, matter, energy, and mechanism. This thought is in brief as follows: Every real explanation in science consists in identifying the antecedent with the consequent, and the effort towards such an identification, the most usual form of which is the principle of causality, is the psychological basis of atomism, of determinism, and of the laws of the conservation of matter and of energy. By a sort of analogy, it even serves as foundation for the tenacious belief of scientists in the basic unity of the chemical elements. In a single thesis only, I feel obliged to differ from M. Meyerson. He believes that Carnot's Law, by its affirmation of an irreversible series of states, sets a limit to this tendency of reason, and so

marks the precise point where nature opposes itself to the aspirations of thought.—Has he not been too quickly discouraged? Would not a profounder analysis of Carnot's Law, revealing it as an increasingly uniform diffusion of energy in matter and connecting it with the phenomena of dissociation and of radioactivity, allow us on the contrary to see that its essential result is an effacement of differences between objects themselves, a progress towards identity? And could we not therefore say that our explanations follow the actual direction of change in the physical world? To be sure, we ought not to conclude that the essence of things satisfies the postulates of thought *in principio*. The truth seems rather to be that every given fact is in itself diverse, individual, unintelligible. This theme has recently been developed by an author already known under a pseudonym as one of our best novelists, and who has just published a work, *Le Pluralisme*, under his real name, J. Boex Borel.[1] This book is all the more interesting because its author seems to have reached his conclusions quite independently, without knowing either M. Meyerson's book or mine. His object is to show, by an examination of scientific facts, that the homogeneous cannot produce the heterogeneous, and that consequently the world is based on a fundamental diversity, and cannot be explained by the hypothesis of a primitive unity. From this he draws three conclusions: The first is that complete knowledge and absolute unknowability are alike impossible; the second, that instead of looking for identity, we must have recourse to analogies, by which he means imperfect resemblance, rather than analogies in the technical sense of the word; and the third, that since the unknown increases with the known, we cannot say that the development of science brings us nearer to any determinable goal. I cannot acquiesce unreservedly in all these conclusions. But the argument is certainly well justified when it leads us to see in the very material of science a radical heterogeneity which consequently produces a residue indestructible by any of our explanations, which always proceed by establishing identities. We must then join with M. Meyerson in the admission that there is

[1] M. Borel shared with his brother the collective pseudonym of J. H. Rosny.

an obstacle to the complete realization of an ideal rational science; but the obstacle is the very existence of the world presented to us in sensation and opposed to us in action. In other words, it is true that we have always before us a multiplicity of individuals, distinct even when they are most alike. But we have an advantage in the fact that the world is *becoming*, and that this becoming, far from augmenting the diversity which embarrasses us, takes place according to laws which we can predict, and in the direction of a decrease in that original heterogeneity which we attest but cannot assimilate.

Two things in the work which I have just mentioned seem to me of good omen. The first is the penetration into philosophy of that fertile idea which hinges the criticism of the sciences on the two cardinal concepts of the *one* and the *many*, of identity and difference. If the history of this movement of ideas, or rather of the resurrection of this ancient way of thinking in modern philosophy, ever comes to be written, it should not forget either Spencer, who understood its value but took it so to speak by the wrong end, or the learned, cautious and too little known philosopher whom the University of Geneva has just lost—Jean Jacques Gourd, the author of *Le Phénomène* and of *Les trois Dialectiques*. The second feature, yet more important, is the realistic, positive, and constructive character of these works in epistemology. It is true that they treat of ideas which have been discussed by philosophers ever since philosophy was first taught, but they no longer use the conceptual method. They deal with these ideas in the concrete, by a study of their history and of their applications. Formerly epistemology sought always to seize mind at its source, by an inner reflection on the act of thinking, from which the explanation of all its effects was hoped for—as vain an enterprise as that of a man who should try to make himself more and more short-sighted in the hope of at last perceiving his own eye. Today men who philosophize begin to understand that one sins against the mind when in order to know it better one reverses the movement by which it constructs all its knowledge. They prefer to follow the onward impulse, already so productive, which urges thought to establish in face of

itself a world of *things* on which it sets its imprint, and then to become conscious of what it is itself by the twofold analysis of its most finished products and of the progress of its creations. And those who confine themselves to this sure and cautious method receive a high recompense. Their works, even when incomplete and faulty, even when planned in ignorance of others, have a common standard which allows of mutual rectification and completion, so that they can coöperate in building up a durable structure, instead of passing in review on the philosophic scene, like singers in a concert, each of whom goes through his passage of bravura, and then disappears in the wings followed by hisses or applause.

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THE NATURE OF TRUTH.

THE pragmatic movement has emphasized practically altogether the *function* of truth in relation to life as a whole. The function of truth is to regulate conduct; and truth, therefore, is valid when it flows into its anticipated consequences. These consequences are further experiences. Epistemologically truth rests on experience; and experience, as one moment of individual consciousness, rests on more experience, the present moment becoming confluent with the new moments in the ever-expanding restless stream. The flow of this stream has its direction determined by the past and present tendencies, but it also has its own individuality, as the old elements flow into the new situations, whether chemical or psychological.

What should be made clear, however, is that pragmatism is a theory of the function of truth, and does not deal with the whole problem. By emphasizing this we may be able to attract attention to the far larger and more complicated problem of the form of truth. To be sure, even in dealing with the problem of function, pragmatism has been inclined to limit itself to the biological function of truth—truth as a factor in the adjustment to the perceptual environment or a tool for dealing with practical situations. Pragmatism has been inclined to neglect the sporting interest in truth—truth as setting its own problems, choosing its own constitution, and thus elaborating its logical consequences to harmonize with its posited world. But this, while it alters our conception, of the scope of truth, does not fundamentally alter our conception of its function, which still remains to regulate conduct—the conduct of the understanding as well as the adaptation to a perceptual environment.

But granting that thought comes to light in the stress and strain of experience—whether forced upon us by the environment or posited as the logical play-ground of the will—there remains the problem of the nature of thought itself. Is the form of thought originated by the 'practical' situation—the consciousness

of difficulty or disorganization out of which it arises? In the case of generating electricity by friction, say by two sticks of wood, we are setting free a preëxistent energy, the nature of which we must respect; and the friction simply furnishes a condition for its manifestation. Is it so with thought? Or is thought created outright by doubt? Does it really grow out of the infra-logical antecedents? In that case, is the form, the laws of thought, too, created? Are they set by the will as its temporal conventions or must they be acknowledged by the will as eternal? In the former case, are they just what the *individual* posits them as being or are they universal? But, if without conventional agreement, we find ourselves acknowledging these laws whenever we think, they would seem to be independent of the will and have a preëxistent character. In Plato's terminology, they would seem to be 'recollected' rather than created in our coming to consciousness of them. The laws of thought would seem to be *discovered* through their use in experience, rather than *made*.

If we look forward to the end of thought, instead of backward to its origin, is thought simply a tool to an alogical end? Or does thought enter into the end of life as an intrinsic factor—not as a scaffolding merely for a higher stage of mystic immediacy or biological activity, but as the law of the process of life? What relation does thought, with its postulates, bear to life as a whole? Such, and many other questions, still remain, after we have agreed upon the regulative function of thought in experience. To ignore the structural aspect of thought means a very invertebrate theory of knowledge.

One thing is certain, that the teleological value of thought cannot be understood apart from its correctness, its technique. The syllogism, with its rules, is a valuable machine for abstracting and investigating valid thought relations, in spite of the contumely heaped upon it. What is true of the syllogism, as a device for ascertaining formal relations, is true likewise of the so-called inductive canons for ascertaining causal relations amongst facts. The practicality of our thinking about perceptual situations lies in its being correct thinking, and Mill's canons are an important device for such procedure. It if is true that the pro-

cedure explains the value of the device, it is also true that the procedure is made possible by its being a correct device.

Are these rules arbitrary? The rules of athletics are not arbitrary, though they may seem so to the spectator. They are the result of studying the laws governing both the constitution of the players and the appreciation of the spectators, so as to produce, on the whole, the best result for player and spectator alike. The conditions governing the game may be said to pre-exist in human nature and to be binding if you choose to play the game and play it effectively. So with the laws of thought. The question, then, arises: What are those laws of thought which in all our reflective procedure we must respect? And what is the basis of their authority? To begin with the first question: What postulates are implied in all thinking and condition its procedure?

I shall try to show that there are four presuppositions or laws which are implied in all our knowing, viz.: the law of consistency; the law of totality; the subject-object form, or the law that knowledge must be representative; and the law of finitude. The use of these terms will become clear, I trust, in the discussion.

I. The Law of Consistency.

First of all it will be generally agreed that we presuppose consistency. Under the law of consistency I include what are usually termed two laws—the law of identity and the law of contradiction. It requires no proof to show that these are merely different emphases of the same meaning. If we use the old formula, A is A, to symbolize the so-called law of identity, the law of contradiction simply brings out the implication that if A must be taken as A throughout the logical procedure, it cannot also be taken in the same sense as not-A. This is true, but it is an implication rather than an independent law. Fortunately, the concept of consistency comprises both of these implications, viz., that for purposes of thought we must be able to take A to be A, and that if we must thus take it, we cannot take it as not-A.

But the term consistency has a further advantage. It not only comprehends both of the old formulas, but it also brings out what they failed to do, namely, that it is identity within a variety of

individuals and changes with which we are concerned. Truth would be meaningless within an abstract world in which A is bare A. It is the constancy of A, as making possible description and prediction, that makes truth mean something. The law of consistency means that in the variety of experienced facts and changes, there must be a certain constancy of content, if we are to make any predicates about our world. Unless we can take our abstract meanings, qualities, relations, or whatever we may be actively interested in, as the same, in spite of flux, we can make no judgments or inferences. This means, formally expressed, that we must take A as A throughout our logical procedure, and that we cannot take A as not-A, if we would reason about the meanings or things of our experience. This implies that, for logical purposes at least, there are such recognizable identities as furnish leadings or threads to the plurality and flux of experience.

We can see that nominalism, in the bald sense of absolute disparateness, would make truth impossible. In such a world there could be no concepts and no inference, as each particular content must be taken as unique. Nor is it necessary to go to the opposite extreme, and speak of universals or identities as existing prior to the instances and these as differentiations of this identity, as even Bosanquet does. This makes knowledge quite as impossible as does pure nominalism, for it is absurd to suppose that from identity any instances could be differentiated. It is enough for truth that certain characteristics can be taken as the same in various individuals or groups, and so make it possible to say something about their conduct so far as these characteristics are concerned.

Nor is a purely dynamic nominalism any more possible. To be sure, truth deals with a world of change. But change need not be chance or absolute discontinuity of process. In so far as such is the case, truth of course is impossible. Change may be circular or practically so; and it is a world with a certain uniformity of characteristics, however much it may change, with which truth must deal. It is only in so far as our world of experience can be taken as constant, that we can have science, though of course such a statement would be meaningless if it were not a world of change.

The law of consistency always has to do with meanings. The meanings may be abstract or hypothetical merely, and our interest may be in their formal relations. Or the meanings may refer to qualities and relations in concrete experience, and so may be concerned with existence. But in any case the law of consistency refers to the identity of meaning, and holds that, from an identical content, identical consequences must follow; so that if certain consequences follow from M in the case of P, the same consequences must follow from M in the case of S.

The law of consistency applied to the concrete meanings of experience—qualities, relations, or whatever they may be—means that you cannot take the same fact as A and not-A. A thing cannot be taken as having the quality of A and the quality of not-A, white and not-white, in the same respect. It does not deal with the question whether a thing can have the quality A and not-A in the same respect. The law of identity is forced upon us irrespective of the object, though inasmuch as reality is for us what it must be taken as, in the procedure of experience, we naturally extend the law of our thinking to things as well. In this there can be no harm, if we know what we are doing and are not postulating some occult harmony to cover up our previous dualism of thought and things, created by our own assumptions. One thing is certain, the world of experienced things is to some extent describable and so must have some degree of identity.

That A is not not-A involves no contradiction. They can still hang together within one system. In fact there can be no system, if there is not difference. Being and not-being, as pure abstractions, do not imply each other. They are exclusive. But as pure abstractions they are also indistinguishable. They can only have meaning within a context. And when we really develop their meaning, instead of bandying terms, we find that they hang together by their edges—that we cannot define one without implying the other within a system of meaning which posits them as aspects of itself. Bradley would argue that A cannot possibly be not-A. Nor can they be related in any manner. For suppose they were like in any way. Then in so far they must be identical or partake of a common term. This leads to an infinite regress.

But what is this but playing with terms? Of course, if *A* and not-*A* be made exclusive by definition, they cannot belong together. But that does not prevent our actual *A* and *B*, as experienced, from belonging together within a system, though perhaps not always one of logical implication, as Hegel thought. Experience is not chopped up with a hatchet, not made up of isolated abstractions. As immediate, the qualities of experience are unique. But as immediate they are neither here nor there, neither this nor that, neither more nor less—no truth. It is because these facts are capable of being sorted into series and classes, on the basis of degree or kind, that we have science. And this distinguishing of degrees or kinds, identities or differences in the world of individual facts, does not seem to disrupt. It contradicts neither their existential nor their appreciative unity.

Two aspects are involved in the concept of consistency, as I am using it: First, that terms must have an identical meaning, must be taken as the same throughout the argument. Otherwise we shall not be talking about the same thing, and so be guilty of the fallacy of four terms. This use of the term consistency is closely bound up with the other aspect: Namely, that from identical characteristics follow identical consequences, whether we deal with relations or qualities, or whatever the selected content may be, and whether the individual facts be the same or we be dealing with new groups of facts. This is equally involved in deductive and inductive inferences. What we must be careful about in each case is to isolate or distribute the identity, to see not merely that there is identity in the situations dealt with, but that it is significant or relevant identity—identity in the same respect, *i. e.*, that it pertains to the consequences which we try to deduce. This is reduced to a technique in the syllogism by rules such as that the middle term must be distributed at least once, that no term must be distributed in the conclusion which is not distributed in the premises, that there must not be more than three terms, that both premises cannot be particular or negative. As regards causal relations the technique of discovering this identity has been systematized in Mill's canons, the ideal of which is the method of difference, which means precisely a distributed identity. We

thus proceed to sort our facts into classes and series with determinate characteristics and predictability. The success may be varied, and even with cumulative coöperation and specialization must necessarily be slow, considering the complexity of our world. Sometimes the result of scientific investigation is simplification of hypothesis. Again, new and unforeseen data come to light, necessitating fresh assorting. But the progress of science, physical and psychological, is evidence to how great an extent the world of our experience lends itself to conceptual manipulation.

As the law of consistency means that an object of experience must be taken as the same (quality or relation) in the same respect; or, expressing it negatively, that an object cannot have different predicates in the same respect, this will be seen to include what Lotze has called "the disjunctive law of thought," a species of which, in the case of only two alternatives, would be the so-called law of excluded middle. To use a concrete instance: a rose *a priori* may be qualified by any one of a number of colors, but as a matter of fact it can be taken only as having one color in the same respect. And if it possesses one, for example, red, it cannot possess any of the other colors at that point. Whether you artificially dichotomize your universe of color as red and not-red for the purpose, or state the actual disjunction of alternatives possible, the result is the same. An object cannot both be taken as having a quality and as having a different quality in the same respect. The 'disjunctive law' is hardly even a corollary. It is rather the explicit statement of the law of consistency, as previously used.

But if the traditional laws must be regarded as different emphases at most of the same principle, they have their meaning, nevertheless, as psychological stages in making explicit the law of consistency. From this point of view the consciousness that A must be taken as A, in a universe of discourse, is less distinct than the consciousness that A cannot be taken as non-A. But the full significance of the law of consistency is expressed in the 'disjunctive law,' viz., that our universe of discourse must be capable of such disjunction that A can be distinguished from B

and every other possible predicate in the same respect—only one of which can be taken as qualifying the subject and thus be predicated in distinction from the rest.

As corollaries or implications of the law of consistency, we would have the axiom that what can be predicated, whether affirmed or denied, of a kind can also be predicated of that kind's kind, which is so vital in all our deductive procedure. And also that what is true of one group of facts is true of another group, if the practical consequences follow from characteristics which the groups have in common. And thus we can extend our knowledge by analogy to new cases and test its application there.

II. THE LAW OF TOTALITY.

But though we are able thus to establish kinds or systems of fact, with their definite connections and predictability *in suo genere*, the question still remains whether these systems cohere into a whole, hang together as kinds, or whether perhaps our world is made up of disparate or parallel systems, whether two or infinite in number. Now to be knowable it will be seen that somehow the various systems must hang together at least with our cognitive purposes. We must have systematic connection in the large (*in dem Grossen*), as well as unique determination within the one kind or series (*in dem Kleinen*). Taking number as one illustration, not only must the various series, finite and transfinite, be self-consistent, but we also demand that they shall form a complete whole. Now this postulate of systematic connection in the large, I would call the law of totality.

This is broader than Leibnitz's law of sufficient reason: Nothing happens without a reason why it should be so rather than otherwise. It does not mean to emphasize teleological connection as over against causal, as has sometimes been the use of the law of sufficient reason. It merely emphasizes that facts do not exist as isolated individuals or isolated groups in our experience, but belong with other facts; that reality, as we know it, hangs together by its edges, so that we can pass from one fact to another, either directly or by intermediaries; and only so can we know it. It does not mean that every fact makes a difference to every

other; that our fancies alter our gravitational relations to the Milky Way. This would be impossible to show. On the contrary, we know that some facts seem to make no direct difference to a given group of other facts; and some make a certain kind of difference only under certain conditions of intensity or complexity. It makes no difference to a color in what part of a space or time series it is located, whether perceived yesterday or to-day, here or in China, given the same concrete setting. But the number of vibrations per second do make a difference. Even here, however, on account of the structural conditions, a certain intensity of vibration is required to perceive light at all, and a certain number of vibrations per second must be added to perceive another kind of light. Experience, as we can take account of it, does not proceed by infinitesimal transitions. The law means that facts possess such uniformities or similarities that we can pass from one to another, under determinate conditions, if not immediately, through a series of intermediaries. If my thought does not directly affect other bodies in space, it may do so indirectly through the difference it makes to my own body. But, by some edges, some common attribute, all the parts of our world hang together. Mind must make a difference, under determinate conditions, to mind, and body to body, and mind to body and body to mind, in so far as they are parts of our experience and known by our experience.

The constitution of the human mind makes the causal category a pervasive one. To know our world means that its various objects can make a difference either directly or indirectly to our minds. This, in the case of the physical world, means a causal difference. To speak of physical changes as parallel to thought would mean that the mind can take account of objects that make no difference to it, which is absurd. That our ideally posited world of objects makes a difference to our purposes requires no elucidation. Thus widely interpreted, the law of totality means that the world with which knowledge is concerned cannot exist in compartments. In a certain sense it may be taken as equivalent to Spinoza's conception of substance, without assuming *a priori* that "the order and connection of ideas is the same as the

order and connection of things." We have to do here only with things as experienced. We might however agree to Spinoza's axiom that "things which have nothing in common cannot be understood, the one by means of the other; the conception of one does not involve the conception of the other"—meaning by "in common" merely that the things must be capable of making a difference to each other under certain conditions, and especially, directly or indirectly, to our cognitive purposes. We cannot know universes split off from our own, if such were existentially possible.

In spite, however, of Spinoza's insistence upon the unity of the one substance, he left us two disparate parallel systems which can make no difference to each other, have no common attribute —the world of thought and the world of extension. Our concern here is not with the metaphysical possibility of such a conception. But for epistemological purposes, we must assume not merely that the universe can be sorted into kinds, but that these kinds somehow hang together, that one part of our experience coheres with another part, either directly or by means of intermediaries. Only in such a world would social objects be possible. Facts thus have not merely a unique determination within their own special system, but have a universal reference, cohering as a whole. And this is what I mean by the law of totality.

And how do they cohere? I can conceive of only two ways, either as cause and effect, or as means within a purpose, logical, ethical, or esthetic. And it is not necessary for epistemological purposes, whether it is for metaphysical or not, to reduce these to one. It is not enough that facts are together in one space and one time. They might be thus together and yet exist in compartments. Space and time do not unify. On the contrary the same presupposition of totality applies to our space and time systems. We assume the unity of space on the basis of the law of totality, *i. e.*, because we believe that our universe of facts, spread out in space, hangs together. And so with the unity of our social time construction. Empirically we do come upon functionally dissociated time series in experience, as in automatic writing and trance, but they are cognitive realities only when

connection is established. Facts must run into each other some way, causally or teleologically, to make the unity required for cognitive purposes. And as all teleological unities are also psychological events, therefore all facts must in the last analysis be causally conceived, according to some definite relationship, as objects of knowledge.

Nor does the law of totality mean merely that the facts of experience are a collection of such a kind that we can use connective symbols as *and* or *with* or *on*, etc.; not merely that we are conscious of the facts together, which we are only to a small extent, but that facts make a difference to some other facts, become confluent with some other parts of experience, in a systematic way. If knowable, they are not merely lumped as *ands* and *withs*, but strung with identities which we can disentangle either causally or teleologically. This we postulate at the very outset of logical investigation. Only in this way are consequences predictable, formally or materially. Whether the laws of thought hold for things or not, they hold for our experience of things, actual and possible. And that is all that is logically important. The form of experience at any rate is predetermined.

Because we must assume that facts, in order to be known, must be capable of making a difference to other facts and so, either mediately or immediately, to our powers of knowing, it does not follow that we must assume that facts, in advance of being known must be strung on the unity of thought. Facts in order to become *known* must be strung upon our hypotheses, become a part of our purposes, but that does not prove that they can only *exist* as thus strung. It is through such stringing that facts come to have their *significance* for our human experience, but that does not prove that they then begin to *exist* or that thus they must exist in a larger mind. Facts satisfy the law of totality when they are capable of making some difference to our purposes under definable conditions. This is quite different from holding that, because we can string things on our unity of apperception, therefore they must already be part of a transcendental unity of thought.

III. THE LAW THAT TRUTH MUST BE REPRESENTATIVE, OR THAT IT PRESUPPOSES THE SUBJECT-OBJECT RELATION.

This is involved in all thinking; and the attempt to state the subject as object or vice versa, for thought purposes, gives rise to a paradoxical infinite which is not a progress toward a limit, but which simply means that you cannot transcend the subject-object relation while you remain within the concept of thought. This paradoxical answer resembles the one you get in number when you ask what number is less than the least conceivable fraction. To which the answer is: Zero, which is not a number at all, and so beyond the series of fractions. The difference is that the conception of an infinite series in the case of number has a warrant in the progress toward a limit, which is not the case in the subject-object relation. Here nothing is gained by the repetition, once you have grasped the law that in every judgment, including the reflection upon itself, the subject-object relation is involved. You do not get a thought at infinity which is neither subject nor object.

A good deal has been said about the self-representative character of thought and its supposedly implied infinite. Now, it is quite true that the proposition, no subject without an object, as a law of thought, must be self-applicable, *i. e.*, the judgment, as regards the subject-object relation of thought, itself involves the subject-object relation. Like all true presuppositions of thought, the subject-object presupposition is circular. Thought activity always means the discovery of the relation of a selected content to a system; and to this the reflection upon the subject-object character is no exception. We simply become conscious of the fact that the self-representative judgment is an instance of the universally representative character of thought and differs in no wise, so far as the application of this law is concerned, from any other judgment.

Now, thanks to language, this representative statement, whether self-representative or other-representative, can be repeated upon itself to infinity. And this, no doubt, has its own value as a logical sport, whether in the philosophy of number or in other speculations; but it does not in any wise clarify the

nature of thought. For purposes of epistemology, the self-representative character of thought simply means that the subject-object relation as a presupposition of thought is self-applicable. It certainly does not prove that truth is an infinite series.

Neither does the universality of the subject-object relation in all our *thinking*, prove that it must hold universally for *existence;* that because we cannot *think* an object without a subject, therefore all thinkable *reality* must be involved in the circle of this subject-object relation; ergo: all reality must be a spiritual or reflective unity. This has been a favorite argument for idealism and is certainly a short cut. But is it valid? We must remember that the subject-object presupposition only holds for our *thinking* of reality. It can only be a presupposition therefore for reality which thinks. Our reflecting upon the stone does not necessarily make the stone reflective, and so does not necessarily sweep the real stone within the subject-object circle of our thought. What parts of reality think and what do not think must be decided upon evidence, and not by any *a priori* epistemological presuppositions. All we can show is that they must hold for *thinking beings*, that they are presupposed in our thinking and that our denial of them affirms them. But we cannot show *a priori* what beings *are* thinking beings or that the universe as a whole is a thinking animal.

IV. The Law of Finitude.

So far from thought being infinite in character, I shall try to show that thought or truth must always be finite. We have seen that thought is in nature relational; that it universally means the active selecting and assimilating of a datum by an apperceptive system which does the selecting and relating. Now both the content selected and the system within which it is to be related or defined must be finite in character. I will use geometry, a purely formal science, to make my point clear. I quote from Russell regarding the determination of points and their relations: "Any two points determine a unique figure, called a straight line, and three in general determine a figure, the plane. Any four determine a corresponding figure of three dimensions, and for

aught that appears to the contrary the same may be true of any number of points. But this process comes to an end, sooner or later, with some number of points which determine the whole of space. For if this were not the case, no number of relations of a point to a collection of given points could ever determine its relation to fresh points, and geometry would be impossible."[1] And again in speaking of dimensions: "The number of relations required must be finite, since an infinite number of dimensions would be practically impossible to determine."[2]

We always base our concepts or laws upon the examination of finite facts and their finite relations. Plato and Aristotle already recognized that there could be no truth of absolute flux or absolute chance. It is only flux that repeats itself under describable conditions, variety with finite characteristics, that can be reduced to science.

To be sure the law may repeat itself in an endless number of instances, there may be no last term in the series. Such series abound in mathematics. But, in such cases, it is not the potential infinity of the steps which constitutes knowledge. Clearly, a generalization from enumeration would be a contradiction, if we assume infinite instances. The concept of the series is based upon the fact that the steps repeat themselves according to certain finite characteristics or laws. It is this, the identical or universal element, with which truth is concerned, not with the repetition. In fact, once the law of the series has been discovered, the repetition becomes useless. You can then take the series as completed. There would be no virtue in repeating the series, $1 + \frac{1}{2} + \frac{1}{4}$, etc., after discovering its limiting term or its sum, whichever you may be interested in. An infinite number is contradictory, because $n + 1$ is the nature of number. This law is based upon the number process as actually observed. The unpredictable character of number, outside of its general law, is well known, because in each case we must proceed by induction from individual instances and observe their relations.

The infinite, in the case of thought, arises from not recognizing the presuppositions of thought, for example, subject and object.

[1] *Foundations of Geometry*, p. 132. [2] *Ibid.*, p. 161.

The infinite series does not solve the problem. It can only bring the presupposition involved, to light. The infinite cannot then be regarded as of the nature of thought. It is merely a result of reflecting upon the nature of a reflective system. It is set by thought as its logical sport. It has nothing to do with the laws or validity of thought. It shows that thought is dependent upon the larger will which sets the game. Knowing knowledge does not mean that we must know in advance of knowledge, but that we must analyze the presuppositions of knowledge. It is the circular character of the presuppositions of truth, looked at as abstract truth, that gives rise to the apparent infinity of truth. But the infinity is only apparent. That the law of identity or any other *a priori* postulate is epistemologically circular is as clear at the outset as it would be after endless repetitions. We need only become conscious of its *a priori* character as a presupposition of truth. To be sure, it applies to itself as a proposition and to the reflection upon this application, etc., but nothing is gained by such a repetition. It is a disease of language.

The infinity of Plato's Parmenides and of Bradley is a paradox created by definition—by taking thought as abstractions, mutually exclusive, and then attempting to bring them together. In the infinite of the Parmenides, for example, you have no true limit, though there is no end to the series. If terms are like, they must partake of or belong to the idea of absolute likeness; but in this case the term must be like the idea and the idea like the term; and this likeness must be due to their partaking in an idea of likeness and so on to infinity. Otherness would do as well as likeness. In fact any relation, taken as an abstraction, will illustrate how contradictory it becomes. Thus the one shows itself other than the other, etc. In Bradley, you have a similar infinite as regards qualities and relations. Here, too, there is no limit or progress in the series. If you start with disparate, independent qualities, then any relation which tries to relate them must have something in common with each of the terms; in that case it disrupts and must in turn be related, etc., *ad infinitum*.[1] But the infinite repetition offers no solution. It

[1]For a recent statement of Mr. Bradley's position, see *Mind*, October, 1909, pp. 494 ff.

simply shows that such a definition of qualities makes relations impossible, which ought to be clear at the outset.

In order to apply the conception of the infinite to knowledge in a significant way, it is necessary not only to show that, so far as knowledge is concerned, the dualism of subject and object, of system and datum, is insuperable and, therefore, that no finite steps can solve it, but it is necessary to show that there is progress toward a limit and what this limit is. Now, in knowledge, the datum to be organized may be considered as capable of greater and greater systematization, and thus growing smaller as outstanding raw material. But this does not prove that knowledge is infinite. Further, it is true that the limit of the thought process, its *rationale*, cannot be reached on the level of thought, for though all other data were organized, all other problems solved—set by the nature of the content or by the free play of thought—when the last surd has yielded up its enigma to the progressive system of knowledge, there remains the problem of thought itself. Thought makes itself the pure content of its own reflections. And here it discovers a limit beyond itself. For thought cannot answer the question: 'why thought?' Or why does thought have this constitution and no other? Why this search for wholeness? Or stating it in relational terms: Granting that we may be able to weave our relations into ever larger and more comprehensive relations, the minor classes into still larger classes, how can we define a system of relations which is not in turn relative to a larger system, a class which is not itself a class? Here you come upon a limit of the process, which like the number zero or the zero of quantity lies outside the process itself, viz., in the purposive will which chooses to realize itself in this way, chooses this form of activity—the will to think. But there is nothing to show that this zero lies at infinity. It is rather the purpose within which thought moves, the end for which it exists. Thought has reached the Canaan of its progress. But, like Moses of old, it cannot enter. This is the land of faith.

Two tests have been proposed of the laws of thought: (*a*) Do these laws presuppose themselves? (*b*) Are they presupposed by their own denial? (*a*) Do they presuppose themselves?

Take the law of consistency—could we deal with the *meaning* of consistency unless we could take it as the same? Clearly not, as this is the only way in which we can define it or deal with it logically. If you take again the law of totality, here presupposing itself would mean that as a proposition it coheres with other propositions of experience, thus indicating a systematic whole. And this is certainly assumed. It is also evident that these laws presuppose each other. The law of totality must have a consistent meaning and the law of consistency must cohere with other propositions into a systematic whole. And this holds of the other postulates. So again with the subject-object relation. This is implied in itself. The judgment about the subject-object relation itself presupposes the subject-object relation. So do the propositions concerning consistency and totality. Likewise must the proposition of finitude be self-applicable and applicable to the other postulates, including the propositions regarding identity, totality, and the subject-object form.

If you take again the second test, viz., that they must be presupposed by their own denial, this too is met by these laws. You cannot deny the law of consistency, and still have the proposition of consistency. You must define what you mean and stick to it for the purpose of the argument. Again, you cannot deny the wholeness of human experience, the unity of our world of thought, because in that case you would make social understanding impossible; and presumably you argue to be understood. It is not necessary to stop to show that each presupposition holds for the other—that the denial of consistency, in regard to the proposition of totality, must imply it, and that the denial of the unity, or social character of our world implies it, when you try to argue consistency. A denial again of the subject-object relation clearly presupposes it. And if you deny the law of finitude, you imply it, for the law of finitude means that you presuppose finite relations, and it can be shown that in denying the law of finitude, your judgment as a matter of fact involves finite relations.

But it seems to me that only the argument, which proves that you cannot think at all without implying these postulates, establishes a universal for their epistemological necessity. This you

cannot get by showing that they are actually implied in any given judgments, for these are not exhaustive. The affirmative implication would only give you a particular result, not a universal. To establish a universal you must show, not only that the judgment selected implies the presuppositions in question, but that you cannot think, make any judgment whatsoever, without presupposing these postulates. That you show that they are as a matter of fact implied in their own propositional statement, and that their denial implies them in the case of their own statement, would only prove a particular application. It is no more significant that they imply themselves or that their denial presupposes them in their own statement than to suppose that such is the case in regard to some other proposition. It would not prove that they must hold in the case of all propositions.

To prove them universal, we can do one of two things. We can assume them as conventions or we can show that, in the actual social procedure of thought, there can be no negative instance without making truth impossible, which would show that they must hold for all cases of truth. In the former case we can meet with no negative instance, because we have by definition forestalled any such instance, just as, when we posit a space of zero curvature, we cannot, for the purpose, meet with a case which is not of that character. But as thought is an actual constitution, we are not at liberty to posit at will. Rather, as in the case of number, must we discover what the ideal constitution of thought is. The second method, therefore, is the one we must choose. And here we must show, not only that the law holds in a particular instance, as in the case of its own statement, but that there can be no instance in which it does not hold.

Now suppose any instance, *n*, in which the law in question does not hold. Take the law of consistency. Then in such a case truth is impossible. For in order for truth to be possible, it will be seen that we must be able to take our meaning as the same. Otherwise there can be no definition or argument. So in regard to any of the other laws. And the consciousness that there can be no truth, if the law does not hold, makes explicit the law If it is objected that this is a circular process and not a proof, I would

entirely agree. The process, however, brings out the implication, shows us the already implied necessity of the postulates for all our thinking. And this making explicit what is implicit is all the demonstration of which the presuppositions of thought are capable.

But does this mean that these presuppositions are also ontologically necessary? That they require no proof as regards their real validity, in the actual procedure of experience? Our ability to acquire knowledge, to meet our world of facts on such a basis, must here be the guarantee and the only guarantee. And every partial success makes the law in so far valid, though a complete success alone could be a complete vindication. If truth is found to be actually possible, then, in so far, the presuppositions are ontologically valid. The mere assumption of ideality, totality, subject-object or finitude does not make them existentially valid. If we are to know, they must hold for our universe as experienced. While they are *a priori* and necessary postulates from the point of view of knowledge, from the point of view of reality they must be treated as hypotheses to be verified in the procedure of experience. It is not inconceivable that a world should exist in which the postulates of consistency, totality, subject-object, and finitude would have no applicability. But it is also true that in such a world truth would be impossible. In this there is no contradiction, since it is from the point of view of a universe where truth is admittedly possible that we make the judgment of the impossibility of truth in a world where its presuppositions do not hold. If you argue truth, you of course presuppose the possibility of truth. The best refutation of the sceptic who denies that there is agreement, etc., is the method of Socrates that we do understand each other. If they are wholly disparate worlds, they at least do not concern us. If the above postulates are true, you can easily conceive a world in which truth is not possible by dropping one or more of the postulates.

But there can be no *a priori* valid metaphysical postulates. The only possible ontological necessities are the necessities of facts—of the conditions which we must meet in realizing our purposes, what reality must be taken as in order to satisfy the

demands of the will. Such necessities, it must be admitted, are in large part hypothetical, owing to the fragmentariness of our knowledge.

On the other hand, it is not conceivable that in a universe where truth is admitted as an ontological fact, truth could also be looked upon as an accident—an accidental variation of a biological process or any other accident. A universe in which truth exists must make it reasonable that truth can exist. There can be no evolutionary epistemology in the sense of biological chance. And the question of the validity of the above postulates is quite independent of any theory of biological evolution.

Is there any difference as regards the primacy of these postulates, for example, the law of consistency and the law of totality? Is the former self-evident in a sense the latter is not? Is it possible in each case to conceive the opposite? I believe it is. If it is possible to conceive a universe existing in compartments, disparate systems, which do not touch each other at any point, so it is also possible to conceive a universe of flux in which there is no identity, and in which therefore no predication is possible. One is no more a fortunate circumstance than the other.[1] But while we can conceive such a world, we cannot conceive thought in such a world. It is also conceivable that a world of dreamy absorption or even of no experience might exist. In such a world there would be no subject-object relation, but neither would there be any thought. So a world of infinite dimensions is conceivable, but thought is not conceivable in such a world.

There can be no priority as regards the presuppositions of thought. If there were, they would not be universal presuppositions. Each must hold for all thought, including itself as well as the other presuppositions. Each is circular in character or incapable of proof so far as epistemology is concerned. It is this circular character of the form of truth which gives rise to the paradox which was already noted by Plato in the Theætetus, viz., that a logical definition of knowledge is impossible, because in defining knowledge we cannot avoid using knowledge in the predicate, as when we use the definition suggested by "some one"

[1] Contrast Lotze's treatment, *Logic* (English trans.), Vol. I, 94–96.

that "knowledge is right opinion with rational definition or explanation." To have a right opinion and be able to give the reason for it, which is the very essence of the syllogism, certainly seems a satisfactory definition of knowledge. And it took the genius of Plato to discover that this definition was really circular, for right opinion with explanation means "right opinion with knowledge of difference"; and so we have presupposed the very thing we were to define—the form of knowledge. This circular or self-applicable character of the definition of knowledge, we have now come to accept. But we must also come to realize that this circular character is in no way remedied by an infinite series of hypothetical reflective acts, to the effect that we know that we know, and again, that we know that we know that we know, etc. Such a series solves nothing. It merely emphasizes the circular character of the form of thought. The truth of truth cannot be proved *a priori*. It can only be proved by its convenience in ministering to the will, which sets the game of thought.

And here I want to offer a caution or two: First, it is well to remember, in spite of the mystical tendencies of to-day, that truth is an adjective of *thinking* and has no meaning outside of systematic judgment. We cannot speak of mystical appreciation, any more than of perceptual immediacy, as truth. Truth is always an active sorting of reality as experienced. This need not mean, however, a transmuting of reality as first experienced. The sorting does not necessarily alter the qualities it sorts. If so there is no way, mediate or immediate, to truth.

In the second place, it is not fair to charge the thought process with the contradictions arising from our conceptual assumptions. Rather overhaul the assumptions. Men like Spencer and Bradley have charged thought with inconsistency and bankruptcy because of the ready-made assumptions with which they have started. It may be there are ways of conceiving space, time, etc., which are not contradictory.

And, thirdly, the way of thought is not the whole of life. There are other ways—immediate perception, esthetic appreciation, the consciousness of duty, etc. But while thought is not all of life, and must be understood in relation to life as a whole, it is the

only way in which we can, in the last analysis, realize the truth of life, its scales of values. And we must be awake part of the time to estimate the significance of perception or of mystical appreciation. Whether we regard it more important to be awake in order that we may sleep or to sleep in order that we may be awake, is likely to be decided on the basis of temperament. Both sleeping and waking, appreciation and thought, in the end, must be estimated from their rhythmic place in life as a whole. Certainly the sleeping states, however blissful, have no truth except as taken up into the woof of the waking states.

THE PLACE OF THOUGHT.

We may sum up the place of thought in the economy of life by saying that thought is an activity of the will, predetermined as regards its form by certain presuppositions which are posited by the will to think. It is not the only activity of the will. The will may be instinctive in its activity, it may be perceptual, it may be guided by concrete images, it may dream. But when the will sets itself the task of thinking, whether for purposes of practical necessity or for the enjoyment afforded by the game of thinking itself, the will accepts or postulates certain norms, a constitution of thought. These it postulates in a very different sense from n dimensional or negative curvature space, which it postulates simply from choice for the sake of a particular thought activity. The laws of thought the will must postulate in order to think at all. The only way the will can choose not to be bound by the necessities of thought is not to think. The will sets itself the task of the conscious definition of its own purpose by means of concepts, and it wills to pursue this process in accordance with certain formal conditions, which it acknowledges as binding for the purpose, viz., the laws of thought. Plato's view in the Parmenides that we cannot know the absolute norms is mistaken. Such norms are for thought ideals, limits, faiths in the attainability of truth, but as such they provide a goal for our striving, and in a formal way at least, they must be the warp of our thinking. They are not generalizations, but presupposed as conditions by all generalizations.

Does thought, then, transcend itself? No, I should rather say thought is transcended by life, the will or faith which sets it. Faith sets the problem of truth—the search for unity. Faith too promises the solution, sets the limit of the process, demands that there shall be form or unity. Otherwise thought would be an aimless play with contradictions. Thought, thus inspired, succeeds in approximations, pragmatic formulas, which are as good as true, even if approximations. But thought itself—*i. e.*, the process of judgment, conception, and inference—is machinery in the service of faith. Thought is relative—relative to the realization of the will, its work and play—relative, as every function must be, to life as a whole. This relativity of thought is shown whether we examine its subject-object form or its relational content. We cannot deal with thought as an abstraction without thought becoming paradoxical or circular.

This impulse to think, however, must not be looked upon as an artificial appendage, tacked on to life without any relation to its fitness or needs. Rather it is a normal expression of life as it unfolds its growth series, as the sex instinct is a normal expression of life and its necessities, however early or late it may awaken. The universe is so constituted as to make such demands upon itself for the largest life. And that is all we know. That truth is possible and that truth is worth while is a faith prior to truth and justified by its consequences to the life process of which it is a part. The ego wills to think—both because it is practically useful and because it provides ideal sport—but in willing to think it also wills to accept the formal conditions without which thinking would become impossible. The will can refuse to think. In that case it can run riot as it pleases, determined by no law except the determinations of pleasure and pain. But if the will chooses to think, then it also chooses certain laws of procedure. Thought itself must accept its own existence and nature as a fact. It cannot transcend its own constitution *a priori* or as thought.

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A NON-DUALISTIC VIEW OF NATURAL SELECTION.

With old-line evolutional ethics[1] the struggle for existence and natural selection made their way as recognized aids to the furtherment of accepted morality, and thus, by preserving the proper relations between altruism and egoism, wayward man and his conscience, entered ethical theory under the protective coloring of ideas under control of a theology in process of extinction. The evolutional moralists, rid of theological encumbrances, were seeking to accomplish on a somewhat higher plane, and in a rarer atmosphere, what the reconcilers had striven for—the equation of new results with old truth. Identities were more evident than differences. The organism and its perfect structure seemed a more real and interesting thing than the individual, so perfectly fitted to the stupendous whole.

But it soon became evident that natural selection and the struggle for existence had been difficult incidents to manage, and that the outcome for man and his morality might have been far otherwise than had been suspected. In biology the growing tendency to restrict the recognized field of operation of natural selection only emphasized the contrasts between this so-called automatic principle and those intelligent or conscious modes of action by which evolution seemed guided in the sphere of human affairs. If these were rejected by the faithful evolutionist, a literal rendering of biological evolution into ethical terms showed nothing more valuable than mere life or existence as the outcome of human evolution, and thus emphasized only those individual or racial qualities which promote mere survival. As a result, we were left to a choice between the idealists' dualistic view of nature and 'selection,' and an equally dualistic but purely materialistic, individualistic, and egoistic ethic. Our question now concerns the nature of this dualistic conception of the foregoing concepts and the reason for its perpetuation.

[1]By which may be understood theories like those of Spencer and Alexander, which accept evolution not as a mere account of a process, but, by reference to natural selection, as a guide also.

I. We may begin with the frequently noted fact that natural selection—formulated by Darwin as "the preservation of favorable individual differences and variations and the destruction of those that are injurious"—was a conception borrowed from the sphere of human purposeful activity and transferred to the biological realm, in which it has acquired more or less precise connotation. It was a metaphor in the beginning, and now, if it be applied to human conduct, it must lose something of the significance acquired in the biological field. Natural selection must, for example, apply to habits as well as to structural variations. We are not concerned, however, with the legitimacy of its application from the biological but rather from the ethical viewpoint, and particularly with the misconceptions which here beset it.

Now in the very precision with which physical science fixes its concepts is involved a danger, especially when a concept, fixed only within a limited field, is attended by a cloud of other ideas—in this case, 'nature,' 'struggle,' 'environment,' 'life,' etc., which can hardly be used without lurking metaphysical reference. The very term 'natural,' rather than 'biological selection,'[1] proper sixty years ago, has lost its applicability, yet still persists only to revive and perpetuate penumbral metaphysical associations with the 'nature' of common-sense dualism. We minimize, says Professor Ritter,[2] the grip in which miraculous creation held men's minds. At a time when special or supernatural creation was held as a dogma, 'natural' was the antonym required to make plain the fact that species were not produced by supernatural design. Now, with the latter view long discarded, 'natural' is left to bear the connotation which it had only through reference to a special theological conception.

That natural selection is a term not literally descriptive of fact has been pointed out again and again. Natural selection, we are told, does not really select, but in the next breath it is said that it is a 'principle of extermination.' Although this is more clearly descriptive of the negative influence of the multitude

[1] *E. g.*, in Karl Pearson's *Grammar of Science.*

[2] "Darwin's Place in Natural Selection," *Pop. Sci. Mo.*, Jan., 1910.

of causes summarized by the term, is it less misleading? While we recognize that natural selection is a mere "shorthand expression for a whole group of well-known natural causes"[1] or "a great bundle of causes, some of which are different in each particular case to which the bundle applies,"[2] we yet speak of natural selection as of an entity, call it 'merciless,' or say that it "works blindly upon promiscuous variations blindly produced."[3] As a matter of fact, it operates no more and no less 'blindly' than the group of causes summarized by the name, which tend to the elimination of those characters that do not favor the adaptation of the individual organism to its environment, and thus to the destruction of the individual possessors. It would seem that all such expressions, which simply beg the question of specific causes, are scarcely less anthropomorphic than nature personifications current in another day—to the effect that 'nature is exceedingly wise and all her works are performed with understanding,' that she "does nothing in vain," "never fails of her purpose," or "always does what is best."[4]

From this point of view the struggle for existence fares no better, and the matter needs little elucidation. Nature has been portrayed as "a vast slaughter-house," a theater of war, in which there occurs perpetually a struggle of all against all. How exceedingly false and calumnious!—as Carlyle said of the axiom that "nature abhors a vacuum." The facts cannot be denied, but the difficulty over the applicability of terms remains more than a mere quibble. Nature is personified as a devil. And though one may discard an anthropomorphic super-mundane god for an infra-mundane or immanent devil, we ought not to overlook the genetic relationship.

The actual struggle of individual with individual, species with species, plays relatively a small part in the universal effort to obtain food, soil, habitation, or, in general, access to the conditions of existence. The universal struggle is only an effort to

[1]Romanes, *Darwin and After Darwin*, Vol. I, Ch. IX, p. 334.

[2]Professor Ritter, in the article above quoted.

[3]Ward, *Naturalism and Agnosticism*, Vol. I, p. 273.

[4]Quoted from Boyle's *Free Inquiry into the Vulgar Notion of Nature* by Professor Gotch ("On Some Aspects of the Scientific Method") in Strong's *Aspects of Scientific Method*, p. 31.

secure them. If there is overcrowding, this is no affair of nature's. Ruling out all teleology, she has no predestined goal. She has no instinct for the type, nor does she bear special malice toward the individual. Adaptation, conformity to environment, are all that are required, and if in the process competition arise, and natural selection be brought into operation, this broad fact of conformity to environment is the general condition which brings into play the special selective principle. The plant or animal species is forced to be content with unfavorable soil or altitude through the pressure of hardier or better adapted rivals; its evolution is thereby conditioned and in time it may perish.

Natural selection presupposes, indeed, the struggle for existence, but the rival species are simply factors in the environment, conditioning through special groups of causes, which their presence introduces, the preservation or elimination of these variations. The 'prodigality of nature,' the overcrowding and the universality of competition, ought not to obscure the fact that the selective forces by which certain variations are eliminated is a natural selection and goes on in a way to which struggle, or competition, is incidental. If we look to the process of elimination by which nature 'selects' certain variations to the exclusion of others, natural selection is a general term for a multitude of causes operative in the environment. If we note the general fact of crowding, as a special condition under which the process of elimination occurs, it becomes a name for a more restricted and determinable group of causes due to the presence of rivals. When sexual selection, isolation, and other factors concerned in evolution are made subordinate to natural selection, the former use of the term seems to predominate. When the scope of natural selection is restricted with reference to other principles, it is used chiefly in the latter sense.

The apparent applicability of natural selection to morals has so frequently been pointed out that in a paper which treats rather of misconceptions than of opposing theories as a whole only the briefest mention seems necessary.

Obviously analogies exist in plenty. The prodigality of nature is ably seconded by man in the profusion of human ideas, theories,

inventions, reforms, some few of which prove fruitful and for a time survive. The competition in this sphere is no less keen,[1] and though aberrant social, ethical or political ideas may long survive by reason of their correlation with other ideas or principles, elimination is in the end effected by a process which parallels that which occurs in the biological realm. Three hundred years ago it was not the exception but the rule for a genuine scientific conception to make its way into the world under the protective coloring of theological ideas. On the other hand, ideas regarding the antipodes, the form of the earth, the nature and cause of motion, etc., based upon Scripture or the authority of Aristotle, long served as 'warning colors' which for centuries told of the power and venom which lay in ecclesiastical system, and bade the over-curious adventurer in the realm of nature keep his distance from 'truths' held sacred.

We see too how phenomena which occur in the animal world are paralleled at the human stage of evolution in the migration of fashions, customs, ideas, philosophies—witness the displacement of an endemic by an exotic species in the migration of German idealism to England in the last century. And again the old problem, How an organ, not yet functionally active and thus without utility, can be preserved, obtains its solution in the sphere of human ideas in the protection which a proven theory or name offers. Its continuance is rendered possible by its correlation with useful ideas or its utility for subsidiary ends. Even seemingly useless organs in the growing body of thought are here preserved. Who but for the powerful influence of a Lodge, a James, or a Lombroso would still treat spiritualism as a living issue?

The business, social, and political worlds furnish abundant instances of the general tendency to the checking of variations unserviceable to the continuance of group-ideas within each sphere. The cheaply made article must be protected by an inducement to the public in the form of a prize package, and if the expensive article is to make its way, a demand—a new environment—must somehow be created. The social reformer must

[1]Vide, *e. g.*, S. Alexander, "Natural Selection in Morals," *Int. Jour. Ethics*, Vol. 2.

modify the scope or rigor of his proposed project, the politician his measure, if he would survive in the capacity of social reformer or politician.

These commonplaces of attention in the field of analogy are not suggested as marking evidence that a process of natural selection occurs in the sphere of human conduct. It is the negative rather than the positive aspect of the problem that concerns us. If we grant with the evolutional moralist that analogy may warrant the application of this concept to morality, then we may ask: (A) What are the leading objections to such an application, and (B), Why does a thoroughgoing evolutional ethics, seeking guidance from this principle, present ends which are manifestly at cross-purposes with the ideals that emerge from an idealistic conception of nature and of man? It would seem that, but for a latent dualism, evolution and a genuine idealism should yield approximately the same standards. Both are in intent and tendency monistic, though these standards are approached from opposite points of view.

II. As regards the first question, then, (A) we have first to note (1) the general objection that natural selection is a soulless mechanical process, careless of individual welfare and mindful only of the type. In the evolutional process there is no room for the individual *qua* individual. Personality can have no abiding significance. Nature seeks the preservation of the race, the mere survival of the human species; the individual counts for nothing.

Now whatever the cosmic process may have in store for the individual and species, the foregoing objection does not seem to hold good in the sphere of human evolution. The common assertion that in the organic world natural selection is directed toward the species, and not toward the individual, admits of a real objection. For "if the character in question is to be preserved by survival, it must be of vital importance to the individual, or it has no influence on the race."[1] This seems to hold true of man's conduct also. However true it may be that qualities of the individual—obedience, self-restraint, etc.—which make for

[1]Conn, *The Method of Evolution*, p. 88.

the welfare of society, are not those which would favor his continuance as an abstract unit apart from the group, the qualities or habits must first be acquired or learned, and made organic to the individual's own ends in the situation in which he is placed before they can be of service to society.

Natural selection is, it is true, an 'automatic' process, but this only means that by the elimination of those variations which are unserviceable to the type, or species, natural selection so operates as to group individuals about a *mean*. And it is just the preservation of this mean that among human beings constitutes the essential condition of moral progress and individual development.

We have only to look to recent idealistic theories in confirmation of this. The individual does not come into the world a full-fledged personality. His personality is admittedly an achievement, a social product. He "feeds upon social models," and by imitation and counter-imitation, trial and repetition, grows into a knowledge of himself. As he goes out into the world the social models, by reference to which his growing body of judgments is socially constituted, are enlarged and become more complex, approaching more nearly the group-concept of his class, community or people. And however much individuality he may display, his life as an individual is lived in constant reference to this *mean* of thought and belief which has established itself and in the past found outward expression in recognized customs, beliefs, and institutions. The establishment of such a mean is the condition of the life and growth of the individual, though in its growth deviation from the norm may be as rigorously excluded here as are unfavorable variations in the infra-human world. And if the objection be raised that a mean which represents a community of judgments or belief, a social standard to which the individual must approximate, is something very different from a mathematical mean, the reply is, that natural selection signifies merely that groups of 'natural' (as opposed to supernatural) causes coöperate in the production of an effect; it is not a theory of the nature of these 'natural' causes or of the mean established by their operation.

And it seems unnecessary that, granting the process, it should

be called 'mechanical'—as opposed to purposeful or intelligent. From the same point of view the process of selective attention, involved deeply in every logical association of ideas, is 'mechanical,' since from the swarm of competing ideas only those are selected that, by reason of their momentarily useful connection with other ideas, are pertinent to the controlling interest or guiding complex of ideas[1] which controls the forming judgment. If we look to the mere swarm of ideas and neglect the organic relationship between the guiding complex and the elements, which, with reference to the latter, find place in the logical association, the selection seems 'mechanical,' or determined by the strongest idea or impulse, most recent association, etc. If we single out the fact that the elements obtain their individuality and significance only by reference to the complex, the latter becomes purposive and the selection 'teleological.' One process is the obverse of the other; or, we take a structural view in the one case, in the other a dynamical view of the same function.

Similarly with reference to natural selection, whether in the sphere of human conduct or of animal activity. If we look to the aggregate of individuals, natural selection seems mechanically to determine the survival only of those which possess certain characters of utility to the *species*, the individual as individual counting for nothing. Survival is then to the strongest, but strength will usually lie in the possession of those characters which are of service to the species. If, however, we reflect that the species is not, after all, an entity, but a group of individuals possessing certain relatively fixed structural and functional characters, which in competition secure their survival, conformity to a type seems equally the condition of *individuality*. It is only the occupation of a favorable locality, the possession of useful organs of offence or of defence, etc., that enable the organism to survive at all, and these appertain to it by inheritance. Were there no uniformities, no grouping of characters about a mean, these would be withdrawn.

(2) A second objection to the application of natural selection to conduct is that in human society progress is for the most part

[1]Cf. Stout, *A Manual of Psychology*, London edition, 1899, Vol. II, p. 448.

due to a process of deliberate selection or rejection of ideas.[1] Here victories in the domain of politics, science, or religion, are won by sheer intelligence acting with reference to preconceived ends. A new process supervenes upon or supplants natural selection, which is thus again termed by contrast 'blind' and 'mechanical.'

But it is an obviously futile proceeding—this effort to gauge the distance which separates a world in which purposive activity plays a part from a world in which natural selection is a controlling principle, by citing instances of purposive action or evidence that such instances abound. One case is as good as a million, since there is something to be accounted for if a veritable contrast exists between the 'higher' and the 'lower,' the purposive and the so-called 'mechanical.' If, however, natural selection is not a theory of causes but only of the effect of aggregated causes, the latter may be teleological or 'natural' as far as the principle is concerned. The only question is that which concerns quantitative determination, and this again matters not to the principle, which concerns itself with our convenience as little as it does with the causes of variation or the nature of the environment.

(3) It is generally admitted that natural selection does not account for the beginning of variations, and this check to its pretensions in the organic world is welcomed by the opponent of natural selection in morals. But if natural selection, in providing for the elimination of unsuitable characters, be a *sine qua non* of the establishment of the mean which fixes itself in the type or species, it is all-controlling, since its scope is not diminished whatever may be the principles we call to aid. The variations may be fortuitous, or due to a life-force, or consciously initiated, so far as natural selection is concerned, which is only a principle of adaptation through elimination. It is thus in merely a negative sense a principle of origin and growth, in so far as it provides a moving type or shifting average to which the individuals must within limits conform. If, however, it is not a positive principle which must be taken into account for the origin of variations, it is difficult to see why the recognition does not favor rather than hinder its application in morals.

[1] W. R. Sorley, *Recent Tendencies in Ethics*, p. 59.

(4) Other objections, however many, must be set aside, as a fourth concept remains to be considered—that of environment. And this also has been reified. Or, in other words, even by the evolutionist it is given a static and entitive character which profoundly affects our interpretation of evolution in ethical theory.

Now "the canon of the principle of natural selection is on the face of it relative . . . what is implied is simply a relation to one's surroundings,"[1] that is, it imports essentially a relation of the individual and of the species to the environment. But what does environment mean? Obviously (*a*) not the totality of all external conditions, but those only within the geographical range of the species, which will be relatively unchanging or variable according as the species is relatively fixed in its habitat or migratory or nomadic, etc. In any case climatic changes, the appearance and disappearance of rival species, and many other conditions render the environment, from an external point of view (*b*) only relatively stable. The life of the species is dependent upon the changing character of external conditions, among which are included competing species, while for the individual others of its own kind, with which competition takes place, constitute a part of its environment, and the latter is, therefore (*c*) not precisely that of the species.

Now it is generally admitted that "variations in the individual are produced by the influences upon him of varying environment. . . . Of the influence of the environment upon the individual no one has any question."[2] And this influence is reciprocal. Even the evolutional ethicist, who in the end may derive ultimate concepts of Life, Health or Strength by reference to a static environment, says that "a species, indeed, does not simply adapt itself to absolutely fixed conditions, like wax poured into a rigid mould. In altering itself it alters to some extent its environment. By extirpating a rival race it sets up a whole series of actions and reactions, implying a readjustment of the whole equilibrium amongst all the races with which it is in contact, and to some extent an alteration in the inorganic world."[3]

[1] W. R. Sorley, *op. cit.*, p. 70.
[2] Conn, *op. cit.*, p. 148.
[3] Leslie Stephen, *The Science of Ethics*, p. 79.

But the fact that by slow increments of change the environment is also altered by the individual is less frequently noted or less frequently held to be of significance. In reality the environment is never, as far as its effect on the individual is concerned, precisely the same after a given reaction or response to external conditions. Thus (*d*) it is not, dynamically regarded, the mere sum of external conditions which affect the individual, but these conditions *plus* the effect of the effort for adjustment on the part of the individual.

Let us turn for a moment to an analogous process which occurs on a higher plane of evolution. As said, the life of the human individual is lived in constant reference to the social mean of thought and belief which has established itself, so that even "the doctrines of the greatest moral teacher . . . are successful only in proportion as they are congenial to existing sentiments" and "give articulate shape to thoughts already present in the social medium."[1] But the influence which this medium exerts upon the individual is not only direct but indirect. The erratic theory, the religious or political propaganda, ill-mated to the social environment, are cut off by causes beyond the control of the individual or party; but as far as the theory itself, or the effort at reconstruction or readjustment, is influenced by the social mean, it is the product of the individual's conception of that mean. The latter is, structurally, a highly complex system of habits of thought, which is constantly modified by fresh experience and new efforts at adjustment to social conditions. Now with the actual environment of the individual, or the social environment, viewed dynamically as affecting him, must always be reckoned this modification—or the actual environment is never the mere aggregate of external influences, but these plus the individual changing concept, and reorganized with reference to this concept.

Is the case otherwise in principle in the organic world, even in the absence of a group-concept, presupposing only organic plasticity and elemental organic memory? Every reaction leaves the animal with a different situation to confront, while, given a newly acquired habit (say an arboreal habit), its actual environ-

[1] Leslie Stephen, *op. cit.*, p. 131.

ment is profoundly altered, though external physical conditions remain practically the same. If we represent the relatively static environment by the symbols *A*, *B*, *C*, *D* . . . *M*, the actual dynamic environment will be *A*, *B*, *C*, *E* . . . *Mx* (*x* signifying the modification wrought by the habit); for if the animal find food in its arboreal excursions, more will be left on the ground for others and new conditions will arise. If the habit become permanent, and if through imitation (which the organic selectionists emphasize) or similar pressure of external conditions, others acquire the habit through successive generations, variations may arise favoring continued adaptation to the new mode of life, and these will be selected.

Thus by slow increments of change in the environment of the individual the general average of individuals constituting the species is a moving average; and in turn the species, always ultimately through the individual, modifies its environment. The latter is never practically fixed and static, but a moving and dynamic influence. And it is environment solely in this sense that is significant in our use of the term natural selection, an environment whose constituent factors can never be fully exhibited in their joint influence.

Now it is admitted that natural selection signifies fitness for survival, the fitness being determined by environment through natural selection, which tends to group individuals about a mean or general average. As the environment is constantly changing, it is this changing environment which determines the standard of survival. But, contrariwise, this dynamic environment, of constantly increasing complexity, is regarded by the evolutional ethicist as something which is merely superadded or superimposed upon a permanent environment, one that determines through natural selection the elemental instincts and qualities of the organism, and with regard to these, the standard or criterion, alike of organic and human evolution. Let us, say they, find the laws which are common to man and the amœba and we shall have the clue to human progress in the future. It is this static conception of environment which occasions the evolutionist attitude expressed in the statement that "we must interpret the

more developed by the less developed,"[1] the complex in terms of the simple, the higher in terms of the lower. Evolution, however, signifies essentially *continuity*, a continuity such that the 'higher' may be exhibited as structurally and functionally continuous with the 'lower;' but the conception that the higher has developed *out of* the lower, or that the lower has evolved *with constant reference to a higher*, is relative to our purpose merely. We have now to consider the bearing which the above conception of environment has for the determination of ethical criteria within the field of evolutional ethics.

B. "The law of nature has but one precept, 'Be strong,' "says Stephen,[1] and this may be taken as fairly representative of the concepts which emerge in the development of evolutionist ethical theory. Strength, courage, prudence and other aggressive or self-assertive qualities, are given not only genetic primacy but ethical priority. Life, health, efficiency, fitness for survival, become the criteria by reference to which the priority of ethical virtues may be discovered. If natural selection be given place in ethical theory, the standard which it provides must also be accepted, and whatever other principles come into play, that conduct must be judged morally right which is determined by the principle of survival. Two problems are here suggested: (1) Is survival a sufficient criterion of moral value? (2) Does the acceptance of natural selection in morals require the admission of the above criteria of evolutional ethics? The second of these problems we may consider first.

(1) Now if natural selection is relative merely, signifying relationship to environment, those groups of causes summarized by the term, natural selection, must so operate as to 'select' those characters which secure the conformity of the individual to the actual dynamic environment in which he lives. Thus, in modern human society, those qualities are selected which secure the individual's adaptation to the complex *social* environment in which he lives and acts. His existence, not, to be sure, as regards mere tenure of life, but as a member of society organic to the whole, is dependent upon his possession of those qualities which are essential

[1] Spencer, *Data of Ethics*, Ch. 1, Sec. 2, p. 5.
[2] *The Science of Ethics*, p. 172.

to the continuance of society. In other words, it is conformity to the relatively complex rather than to the relatively simple environmental conditions which is favored by natural selection. Such conformity is secured by adjustments; these, in turn, favor life *indirectly* through the continuance of the functions which society provides for him as a member, functions without which mere organic instincts and corresponding activities of expression would, on this higher plane, be powerless to secure the end, namely, life, which evolution at lower animal levels seems alone directly to favor.

Admittedly, the more complex activities of individuals in modern civilized society, and progress—if there be progress—are dependent upon the integrity of basal instincts which members of the most complex society have in common with those of the simplest and most primitive. But the fact that such needs and instincts are basal to all mankind does not warrant the inference that natural selection directly favors only the continuance of those modes of reaction which satisfy them. At whatever level, the implications of natural selection are always utility, efficiency, fitness for survival because of adaptation, and through adaptation the preservation of a no-wise static mean. But all these conditions are relative to a changing dynamic environment quite other than that which interprets the end as life. We must say either that Life—another reified concept—means differently at different levels of evolution, or that life itself, as the mere continuance of organic processes in the individual, is an end which at higher stages of evolution can be secured only by forms of adjustment that favor primarily other ends than life.

In misinterpretation of this relation Professor Sorley says: "Surely it is clear that it is only in the rarest cases that false or inadequate ideas . . . have any tendency to shorten life or weaken health. Bishop Wilberforce was killed by a fall from his horse, not by the triumphant dialectic of Professor Huxley. Sir Richard Owen lived to a patriarchal old age, and did not disappear from the face of the earth because he clung to an idea which the best intellect of his time had relinquished. There is nothing in the doctrine of the fixity of the species—if you hold it

—which will in the least degree tend to diminish vitality. Natural selection has practically no effect at all in exterminating those who adhere to this idea."[1] But the principle could hardly be maintained as a universal proposition with the history of the Middle Ages as a witness to the effect which adherence to an idea has had upon the life and health and fortunes of scores of individuals. It would be more to the point to show that the life, liberty or reputation of Bruno, Galileo, Lavoisier, Priestley, Flade, Agrippa, Bekker, and scores of others—among them Colenso, befriended and persecuted by Bishop Wilberforce—were unaffected by their adherence to ideas that were incompatible with prevailing beliefs.

But persecution, happily infrequent at present, is only incidental to the requirement we have been considering. With the growing complexity of human social relations it becomes evident that the expression 'staking one's life' or 'one's all' is no mere figure of speech. So delicate are the adjustments and so intricate the trains of circumstance set in motion by slight mischance, that health and bare life itself depend upon the nicety of these adjustments. If temperance, courage, and other basic qualities are necessary to the preservation of the health, strength, or efficiency of the individual, the scope and exercise of these virtues are in turn dependent upon countless intricate adjustments to social conditions or relations in which the individual is a worker for personal and social ends far removed from that of life itself. However strong and aggressive the individual and prominent the qualities that make for mere preservation of individual existence, the individual and these qualities are not quite the same in all conditions, and in the fulfilment of all functions in society. In contradiction to the evolutionist conception that these more complex—not to say 'higher'—functions and adjustments are mere modes of life-saving, that is, subordinate to the quite general ends of life and health, they seem directed rather to the conserving of life as identified with the correct fulfilment of functions in society. And natural selection—if it be applicable in this sphere—favors by its negation of maladjustments efficiency for

[1] W. R. Sorley, *op. cit.*, p. 59.

the performance of those functions which society is selecting in its progressive definition of life in terms of function. The individual obtains his own definition of life from his social, or psychical environment, and by his choices identifies his life with the functions consequent upon his definition. Life and personality become one; but to say that the end is life is less significant of the process than to say that it is personality. To define the end in terms of life is much the same as to define a watch in terms of brass and nickel, and to regard escapement, balance-wheel, and main-spring as so many specialized forms of mechanism by means of which time-keepers are seeking the conservation of metal.

(2) Is survival an adequate criterion of moral value? Here we are met by an inevitable antinomy between the ideal and the actual, the 'ought' to be and the 'is'; and it seems that from the very nature of morality the contrast must be absolute. Yet that which ought to be is necessarily determined causally within the limits of what is possible of realization with reference to conditions which obtain within the actual, conditions that are the result of a continuous process of evolution. And if evolution applies within the sphere of morality, one must hold that *what shall be* is determined, or has its determinate place, with respect to *what has been*, or, in other words, that the future is in principle continuous with the past. In this case the *ought to be* would signify, (*a*) merely individual recognition of the unattainable, or (*b*) more or less adequate prevision of the future for which natural selection and survival provide the means. But natural selection is, we have seen, relative to the higher, not to the lower environment; or modes of conduct are selected not with regard to conditions that have become fixed in stereotyped forms, but with reference to a complex social and psychical environment which is always in advance of these.

And this is the reason why the record of the past can never accurately forecast the end; for of the social medium which determines always, in its relation to the individual, the direction which evolution shall take, the individual alone is the interpreter. The goal remains an individual one, but the creation of the type is the primary condition of the existence of the individual, and con-

formity to the type has less a negative and restrictive than a positive significance. Thus to say that natural selection favors the type rather than the individual is to say that it favors that which is the condition of individuality at a given stage of evolution. The type exists only for the individual—to be in him, the individual, in the form of instincts, habits, associative processes —while, in turn, the individual exists only to express in himself the type, as only in so doing can he realize himself as an individual. Natural selection, in the ethical sphere, at any rate, implies the negation of the individual as an entity opposed to the type, and is thus equally a positive principle, making 'automatically' for growth in personality. To be all that men are—were such a thing possible—would satisfy the conditions of unique individuality and ideal personality far more than to be what no other man is—were this also possible. But it is the latter ideal that is dominant in much of the anti-social ethics which, like that of Nietzsche, finds favor in men's sight at the present time. Evolution favors such ethics only when we create fictitious dualisms like the foregoing, disjoin idealism from the process, and reinstate human egoistic qualities which, however good in themselves, have long since become organic to other ends.

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REVIEWS OF BOOKS.

The Development of Religion: A Study in Anthropology and Social Psychology. By IRVING KING. New York, The Macmillan Co., 1910. —pp. xxiii, 371.

This book may be described as an able and well-informed attempt to explain the complex and perplexing phenomena of primitive religion by the methods of a functional psychology closely affiliated with 'instrumental pragmatism.' The introductory chapter, however, discusses "the possiblity and scope of the psychology of religion" in a way that at first seems Neo-Kantian rather than pragmatic. By a rational explanation is meant one in terms of efficient causation (p. 13). This applies to the values as well as to the contents of religious experience, since "all predications of value are themselves facts to be explained along with other experiences. The values and ends for the psychologist are probably quite different from those conceived by the possessor of the experience" (p. 15). The old method of analyzing the religious experience as so much static content, and attempting to reduce it to terms of emotion, will, or thought, themselves left undefined, is quite futile. Any significant advance, here as elsewhere, must "take account of the implications of the reaction as the fundamental psychic unit, . . . (and) attempt to treat the acts and states of consciousness with reference to their setting in the general life-process" (pp. 22–23).

The four following chapters all deal with the origin of religious attitudes and practices from the point of view thus defined. The theories of an innate or ultimate instinct or perception, accounting for religion, which Müller, Tiele, Jastrow, and others have adopted in various forms, involve a serious misuse of the term 'instinct,' which in its proper meaning does not necessarily imply consciousness; and they simply put to one side the real problem, which is "to show how and why, given certain acts, the religious consciousness, or attitude, has been built up" (p. 28). If anything is fundamental and common to the various religions of the world, it is not any objective ideas or beliefs, but an attitude which may be described as appreciative or valuational. The various forms of such an attitude are developed as elements in differing reactions to environmental situations, social and physical. For primitive man, at least, the practice or rite came first, and caused the belief.

Acts of the simplest type are instinctive or impulsive movements,

involving little or no consciousness. As they become more complicated, they become objects of attention, and gain significance and value for the agent. Dr. King distinguishes and illustrates four ways in which such complication has developed: conscious attempts to adopt means to end; the accumulation of chance variations in conduct, preserved and transmitted by social heredity and imitation; emotional overflow in imitative action when the real action is for the time prevented; and the results of the play impulse. Only as complex activities are thus developed is the value of the end fully realized, for the associated acts both engage the attention and give time for the consciousness of value to develop; and as such activities become habitual they may themselves "become the basis of many emotional values which have little or no connection with the original object of the acts."

The origin of valuation is connected with crises, then, occasioning in these various ways complications of conduct. "In the case of primitive man, the most acutely felt inhibitions were certainly those which affected the group as a whole"—the needs of food and of defence (p. 66). His tribe is in fact his universe. All his permanent values are therefore *social* values; social activities are the matrix from which all higher values, and especially the religious, emerge. The less definite the social structure, the vaguer and more uncertain religious values and ideas are.

Social values are religious for primitive man because they are ultimate. "The religious attitude may be said to be the consciousness of the value of action in terms of its ultimate organization," and this for the primitive mind is "activity organized with reference to the welfare of the tribe as a whole" (p. 85). The fifth chapter, on "The Origin of Religious Practices," is devoted to an extended review of various examples of such social activities, arising in the four ways already enumerated, and showing every gradation "from the purely playful and practical to the religious."

Common habits of action as the basis of commonly recognized values, however, will not of themselves explain the origin of ideas of deities. We must take account of another factor, the widely spread primitive belief or 'concept' of a mysterious power or force behind all natural phenomena. The plausible evidence that this, and not a personification of nature, is the savage's original way of viewing things, is reviewed in the sixth chapter. Not definitely conscious of personality in himself, he is not at first likely to ascribe it to other things. But he explains the strange, the wonderful, and the startling by the presence or possession of an undefined power or force, which is often conceived in a quasi-mechanical way. This idea is not in itself religious. It becomes so only as it is taken up in a valuational consciousness of the general type already described, and it contributes to the development of magic as well as of religion.

An interesting discussion of the relation of magic and religion follows (Chapter VII), introduced by a criticism of Frazer's well-known theory of the priority of the former, which seems to me the clearest and most adequate yet published. In the main Dr. King agrees with Jevons, that magic coexists with religion, but is distinguished from the latter by its relatively unsocial, secret, and individualistic character. But his genetic method enables him to avoid the tendency, which Jevons to some extent shares with Frazer, to describe the savage's original attitude towards his world in terms of the reflective understanding. There is a substratum of primitive practices from which both magic and religion develop, and which at first appear, as already described, as unreflective and spontaneous reactions, largely playful, emotional, or mimetic.

The eighth chapter discusses some "further considerations regarding the evolution of the religious attitude." This chapter would, it seems to me, be more properly placed if it followed the fifth. The attempts made to describe this evolution in terms of approach to some predetermined concept, such as monotheism, or as the unfolding of an original 'instinct' or 'idea,' are rejected as unsupported by the analogy of biology, from which it is held that they borrowed their method, and as contrary to the facts. Primitive religions arise from the activities of the group, and in them we do not find a constant element which gradually becomes explicit, but "an indefinite number of discrete attitudes, which, within limits, bear a definite relation to the matrix of experience out of which they have evolved" (p. 213). "The only continuity in religious evolution is the continuity of the social background, which, under varying conditions, produces varying types of religious growth" (p. 217). These statements apply especially to the primitive phases of religion. The more developed forms, like well-marked biological types, acquire a momentum and 'direction of movement' which makes their further development relatively independent of environment.

The "origin and development of concepts of divine personages," and the "problem of monotheism and of ethical conceptions of the deity" are the subjects of the ninth and tenth chapters. Deistic ideas, like other religious 'expressions of value-sense,' develop through social reactions. The interests which produce them are of the most various kinds, and we must be on our guard against one-sided explanations of their origin. There is "a natural transition from objects of attention to objects of real religious adoration." Situations of strained attention or interest, involving as they often do, a 'take care' or 'watch out' attitude, produce quite naturally in the savage mind the notion of a 'power' in the interesting object. This notion is most easily associated with living beings, human

and animal, and with their spirits after death, since these are natural objects of social interest. What further 'filling-in' of the idea of the deity remains to be explained "is in large measure due to the play of fancy as stimulated by human associations" (p. 258). The manifold myths of 'culture-heroes,' ranging from the clever trickster to the racial god, illustrate the various steps of the deifying process.

Such beliefs and ideas as these, with their associations of 'power' with conscious personal agents, "assist the primitive man in bringing his world, with its piecemeal conceptions of force, into personal relationship with himself" (p. 262). The Hebrew and Christian ideas of God are the results of the same laws which explain the appearance of monotheistic ideas elsewhere. So far as mere monotheism is concerned, it seems possible for it to appear at a relatively low stage of culture; for we must distinguish between psychological and metaphysical monotheism, and of the former "the essential elements are present in a merely tribal god (since) he is the symbol of the most dominating values in the tribe's experience" (p. 269). There is no such abrupt gap between primitive and more advanced religion and morals as is often assumed, from the standpoint of the higher civilization. "The actual presence in primitive *ethos* of all the fundamental human virtues" is plain to the unbiased observation of one who takes the genetic standpoint, as, for example, in the case of the central Australians (Chapter XI, Religion and Morals).

The topic of the twelfth chapter is the relation of religious values to the 'pathological,' or broadly speaking, to "unusual experiences and unusual motor-activities" (p. 308). Since religious values stand for the ultimate well-being of the individual or of the group, and, as social products, are reinforced by social suggestion, they are naturally "powerful excitants of the imagination and of the emotions" (p. 313). The abnormal phenomena thus produced are explained by the naïve mind, like other things connected with interesting social activities, by the quasi-hypothesis of a supernatural power; and this very hypothesis "tends to accentuate" the phenomena in question. The notion that we have special relations with the divine through the 'subconscious' must of course be rejected as a mere survival of primitive ideas; but nevertheless these unusual experiences have their own value in developing higher types of religion. In the first place, the subliminal stands, in part at least, for the values of past experience, and "the centre of consciousness, because it is primarily an adjusting apparatus, is often inadequate as an index to the entirety of life" (p. 327). In the second place, "mental pathology, up to a certain point, is . . . especially associated with the development of individuality" (p. 330)—the appearance of prophets. Social acceptance, the corre-

spondence to genuine human needs (p. 336) is however the ultimate test of the validity of the teaching promulgated by the prophet.—For, as the last chapter of the book argues, the question whether beliefs in the supernatural are essential to religion, while always pertinent, no matter how complete the psychological explanation of such ideas—for "one sort of experience cannot be said, offhand, to be more reliable than another kind" (p. 338)—must be decided in the light of our knowledge of how the beliefs originated. And this shows us that they are primarily 'symbols' of value, 'working concepts,' 'practical hypotheses,' the products and the 'tools' of attitudes.

In attempting a criticism of the book, it must be said, in the first place, that Dr. King has succeeded in what he describes as its primary purpose —"to contribute something toward the definition of social psychology by illustrating the application of psychological method in the interpretation of the data of a relatively limited field of social phenomena" (p. viii). There have been in this country a number of psychological studies of various phases of religion; this is the first to examine and utilize in a comprehensive way the data on primitive religion now so richly furnished by anthropology. While the exposition is not overburdened with the wealth of illustrative material thus available, that offered is aptly selected and thoroughly organized. The previous work in this field has often been classificatory rather than explanatory. It has halted with the enumeration of practices and of ideas, such as animism, 'naturism,' fetichism, ancestor-worship, which themselves needed explanation, or, if explained, still required an explanation of the way in which they became specifically religious. Primitive religion has often been arbitrarily identified with some one of these. The psychology consciously or unconsciously used by some of the most eminent anthropologists has been of the classical ratiocinative and associational type. Dr. King's standpoint, and his emphasis upon the social and active character of primitive mind, enable him in large measure to substitute explanation for description, and to throw new light on some of the most vexed questions in savage beliefs and practices. The discussion of totemism at page 150, and that of so-called 'high gods of low races' at page 235, are admirable examples of this, though merely incidental to the general discussion.

It is, however, surprising that a work on the psychology of religion, published at this time, should take no account of the recent volumes of Wundt's *Völkerpsychologie*. Some reference to Wundt's account of 'mythological apperception,' and to his theory of the 'bound' or 'fixed' soul, would have been useful in considering the primitive idea of mysterious power, and its eventful incorporation in deities, which Dr. King explains

largely by association. At any rate, Wundt's theory must certainly be reckoned with.

Dr. King's identification of many early religious practices and ideas with the social activities of the group, and his explanation of their *original* ultimateness in value by the ultimateness of the group for the interest and experience of the individual at that time, seems to me well-founded. But I do not believe that by itself it will explain the nature of all religious *ideas*, especially the later ones, any more than an account of the origin of some æsthetic values in mimes and dances as social activities, let us say, explains the development of a sense of the sublime or beautiful in nature. Those who do not regard the 'instrumental' view as an adequate account of mind will naturally be disposed to allow more to that '*metaphysisches Bedürfniss*' of which Schopenhauer speaks in a similar connection. The theoretical interest certainly plays an important part in the history of religious ideas, and not all of religion belongs to the habitual side of mind. Dr. King points out the great share taken by 'reflection' in developing the more advanced 'historical' religions. Some consideration of the nature of 'reflection,' as an activity which interprets its objects rather than responds to them, might go far to establish a continuity in the various lines of the religious evolution which would not reside chiefly in a physical or social 'background' or 'environment' of the religious mind, and to justify a metaphysics as well as a psychology of religion—since it would show that there are other modes of explanation besides efficient causation. But this issue is too fundamental for discussion here.

The book is well and accurately printed. The note on page 13, which evidently was at first in the body of the text, should be restored to its original position, as its absence leaves an hiatus there. Sir Alfred Lyall is referred to in the Index, and on pages 191 and 248, as 'Charles.'

EDMUND H. HOLLANDS.

HAMILTON COLLEGE.

Knowledge, Life and Reality; An Essay in Systematic Philosophy. By GEORGE TRUMBULL LADD. New York, Dodd, Mead, and Co., 1909.—pp. x, 549.

The new book by Professor Ladd makes no profession of adding anything radically new or distinctive to the body of thought already worked out by this author in much detail throughout a series of well-known volumes. Nevertheless, it has a genuine and significant place to fill on the shelf of the *corpus Laddicum*. It is not only a sort of *omnium gatherum*, drawing all portions of the system into the conspectus of a single volume, but it is also in some sense a message to the gentiles, since its style and arrangement are designed to make it less formidable to the unwary than

are more special discussions. The author says: "Several of these have been designedly technical and elaborate treatises of particular departments of philosophy. But in this one volume I am putting into semi-popular form the system of reflective thinking which has been evolved and published previously in separate volumes. The reader who requires a more detailed exposition and defense of this system should study it in these monographs. To them, however, not infrequent reference has been made in the present volume." Accordingly, a survey of the table of contents shows that the material of this book is distributed among the special departments which Professor Ladd has already treated, assigning about three or four chapters to a department. The direct quotations, while sometimes rather extensive, are on the whole less in evidence than might have been anticipated. The general plan of the work suggests in some ways that of the *Introduction to Philosophy*. And this also is an introduction to philosophy. The main differences between the two turn upon the fact that the earlier volume was before the elaboration, and the present one after the detailed development of Professor Ladd's system. True the reader need not be already acquainted with that system; but the book is written with close reference to the form in which the discussions stand on many hundreds of printed pages.

Our estimation of the present book will turn to an unusual degree, then, upon the significance which we find in Professor Ladd's philosophical work taken as a whole. From the standpoint of encyclopedic completeness and attention to empirical science, his system is comparable to that of another great system-maker, Herbert Spencer. The comparison is suggestive. Herbert Spencer has received a great deal of attention from all the world, and is especially well known to students of science. Yet there can be little doubt that Professor Ladd's work is based upon a richer, sounder, and more critical treatment of the various branches of science which are relevant to its issues, and it is incomparably more competent in its treatment of the major metaphysical ideas involved in a philosophical synthesis. But it is more sober, balanced, considerate of all interests, and home-staying. It does not turn the entire cultural universe upside down. And therefore it makes little noise. Perhaps it should be urged more strongly upon the attention of scientific students who seek some reasoned discussion of the import of a philosophical synthesis in touch with the empirical sciences. At any rate its experimental character is far more genuine than that of Spencer.

When compared with the systematic work of trained metaphysicians, however, and especially of those trained in the dialectic of the Hegelian school, Professor Ladd's writings exhibit a noteworthy contrast. The dialectic is less forceful. It can almost be said that these writings do

not try to prove things. They do, indeed, state matters in such a way, and manage the discussion to such an effect, as to make the faith in higher categories seem reasonable and justifiable. The characteristic Laddian bond of inference is rather well expressed in the present volume (p. 193) as follows: "And now, gathering together the conclusions which seem suggested, if not forced upon the mind by an attempt to interpret the significance of the categories, we affirm," etc. If the reader's faith and hope are already determined in the same direction as that of the author, the discussion may give both insight and the consciousness of a fair measure of rationality. In the face of sharp adverse criticism, however, more powerful weapons are needed. Of course it is possible to retort that the appearance of greater stringency in the dialectic of the disciples of Hegel is delusive, and that the gentle persuasiveness of philosophical insight is more fairly interpreted by the more modest and demure manner of Ladd. But at any rate the contrast is sufficiently genuine, and reveals Professor Ladd's writings as less efficient representatives of *philosophia militans*.

In regard to content of teaching, this writer is noteworthy for the many sidedness and sanity of his system. His realism is of a type which enables him to engage closely with the sturdy dogmas of common sense, and yet he can appropriate the higher idealism of German metaphysical speculation. The student whose insight has been borne on to the more reflective concepts of philosophy may be irked by the frequent appearance of "selves and things" on Professor Ladd's pages; but it is needful to remember the penalties which philosophy has paid by reason of too violent a breach with common sense. The sense of illusion which so much of metaphysical discussion carries with it is both unnecessary, false, and harmful; and the phenomenalism which strives to fixate this illusionism into a philosophical dogma is theoretically indefensible. The insistence upon the ontological character of even ordinary perception, as well as of the scientific judgment, is compatible with the highest reaches of philosophical idealism; and it is the merit of this author to have maintained such compatibility with a steady hand. Especially in the middle reaches of a philosophical student's reflections, discussions of the type and spirit presented by Professor Ladd are of service.

In point of literary style the present volume is somewhat less difficult than some of the others. It remains true, however, that a considerable amount of serious purpose is presupposed in the reader, and also that this writer does not attain the verve of philosophical expression which a very few men, inferior perhaps in point of sanity of thought and judgment, are able to display.

E. L. HINMAN.

UNIVERSITY OF NEBRASKA.

Consciousness. By HENRY RUTGERS MARSHALL. New York, The Macmillan Co., 1909.—pp. xv, 685.

This volume fails to come under any of the usual classifications of psychological works, in fact combines many characteristics that are usually looked upon as incompatible. It is introspective in its method, but not sensationalistic, hardly even structural in its point of view. It makes very little use of experimental results, but is altogether empirical in attitude. All of the results are closely related to nervous action, but the treatment is not all at physiological, there is not even a figure of the nervous system. If one were in need of finding a school for it, one would be compelled to go back to the old systematizers, Mill and Spencer, for a prototype. But this gives no more than the temper of the book, the method and the material are altogether modern. The results and assumptions would be alike foreign to Mill. Whatever else may be said, the treatment is altogether fresh and original. The volume aims to give a thorough description and explanation of consciousness in its broad outlines. It makes no explicit reference to the wealth of experimental material that has been accumulating, although in full harmony with the results of modern research.

The discussion is divided into three books. Book I treats consciousness in general, Book II the general nature of human presentations, Book III the self. The volume assumes that consciousness is a mass in which at any moment certain parts are emphasized while the larger part below the level of apprehension, constitutes the large field of inattention. Corresponding to this is the physical or neururgic system which parallels the psychic system at every point and in every respect. In it, too, some small portion will be in marked activity at any moment, while the great mass will be subordinate. In each system there is complete interaction between the parts of the mass, both the emphasized and the unemphasized. The character of the pattern that appears upon the surface depends upon the elements that constitute the field of inattention as well as upon those that hold the center of attention. Dr. Marshall would accept the view that there is no psychosis without neurosis, and also its converse that there is no neurosis without psychosis. In the action of the lower nervous organs he would assert with Lewes that the accompanying consciousness is reduced; but still that these parts contribute something to the total consciousness. Our author also is prepared to believe in the possibility of a social self that shall correspond to the action of the separate nervous systems in the same way that the individual selves correspond to the action of the parts of the nervous system.

In the concrete consciousness one is immediately aware of two opposed

systems, the objective presentations and the empirical ego. To understand consciousness one must explain the presentations and the ego. Each has certain qualities that may be indicated and these qualities are combined in different ways. Both the presentations and the ego are constantly undergoing change. Each activity induces changes in both systems that modify them permanently. In consequence no two presentations are ever exactly alike. If they were they could never be compared or be known to be two. The identity is ascribed for practical purposes only; it is not complete. The empirical self is always the center of reference and is marked by certain qualities, but it is not the true self, this never reveals itself in consciousness.

The qualities of presentation are divided into two groups: those marked by the relation of more and less, intensity, manifoldness, and realness, and those marked by a norm and departures from it in two directions, pleasure-pain and time, which is described as the quality of present and the opposed qualities of past and future. Each quality is unanalyzable and can only be referred to its conditions or pointed to in consciousness, it cannot be described. One might ask where extent and clearness are to be found in the series. Marshall's answer is that the spatial qualities are not ultimate; they are sub-heads under objectivity or realness, perhaps coupled with manifoldness. Clearness on the other hand is but one form of intensity. The intensity that comes from the nature of the stimulus is the same in ultimate quality with the intensity that arises in voluntary attention. The only difference is that one is the result of the activity of a narrow neururgic system, the other of a broad system. It is to be noted that the algedonic qualities are made distinct from feelings, and realness is distinguished from the assurance of realness that follows upon reflection, or in any way requires assertion of the self, as in belief in the realness of a thing after doubt. The feelings are an expression of the activities of the real self, and are found in the vague experiences of ecstacy, æsthetic or religious. The algedonic qualities correspond to definite forms of response of the nervous system, pain to the response of an inadequate nervous system, pleasure to the response by a nervous system in an adequate condition. A large portion of this book is devoted to a discussion of the ways in which these elementary qualities combine in the different sorts of presentations. Under this head are discussed the more concrete operations of association, memory, emotions, etc. Each finds its place in some combination of the primary qualities.

The most interesting and novel part of the volume is contained in Book III, the discussion of the self and its control of presentations. Two selves are distinguished, the empirical ego and the real self. The empirical

ego is the group of experiences to which the presentations are opposed; it is as much in consciousness as the presentations themselves. The real self is composed of the elements of the psychic system that are not conscious at the moment, it includes the field of inattention. The character of the self is determined by instincts and by all of the earlier experiences of the individual. The self is the immediate factor in the control of thought and action, although it is itself dependent upon the earlier experiences of the individual upon the earlier selves. Feeling is a conscious expression of the action of the self upon presentations. Feelings in consequence are vague and seem to have little sensory content. In looking at a picture one may lose one's self in the contemplation, all is lost but the reaction of the self. Belief similarly involves the self in the act of affirmation, it is an expression of all that there is in the self. Conation is an outcome of the nature of the self. 'Every psychic system has within it a tendency toward a movement beyond itself.' Volition, on the other hand, comes only when two conative tendencies are opposing each other with approximately equal force; then 'an efficiency from within the empirical ego arises to enforce one of the two incompatibles and reduce the other.'

Neither the empirical ego nor the real self are permanent and immutable. Both depend upon the way the field of attention may be organized at the moment, and this varies from time to time in the normal individual, and shades over into the various forms of pathological, alternating, and dissociated personalities. Dr. Marshall's own manifold divergent activities are made to furnish very interesting and apt illustrations of the mutations of the self. These mutations are to be explained by the changes in the noetic and neururgic patterns. The emphasis is now on one group of experiences, now upon another, and with these changes come the changed reactions and functions that mark the selves as different. Three corollaries treat the problems of responsibility, of the freedom of the will, and immortality, in the light of the results reached in the book.

It is of course impossible to do a work of this size justice within the limits of a review. One can but point out the essential features, and these but schematically. Criticism of a book of this sort is also bound to be inadequate. The reader is very likely to wish in places that the author had curtailed his exposition, had indulged less in restatements. But the deliberateness of exposition gives opportunity for bringing in many interesting illustrations, and these introduce much matter that is valuable for itself. It is probably unfortunate, too, that the familiar nomenclature has been applied in new ways, or that old meanings have been resurrected. One must grant, however, that the terms are used consistently and the shades that have been used are essential to the system. In the prevailing

disagreement on terms it may do no harm to have a new contestant in the struggle for survival. The reviewer regrets that Dr. Marshall did not connect his work more closely with the results of experimental work, both for the light that these results might shed upon the matter discussed, and for the value of the discussion for the experimental results themselves. One cannot be sure however that had anything been omitted the result might not have been impaired in some way, and had anything been added it would not have been this book. So long as a very desirable end has been attained it is ungracious to quarrel over the method.

W. B. PILLSBURY.

UNIVERSITY OF MICHIGAN.

History of Medieval Philosophy. By MAURICE DE WULF. Translated by P. COFFEY. New York, Bombay, and Calcutta, Longmans, Green, and Co., 1909.—pp. xii, 519.

"The present English version," writes the author in his preface, "forms a Third Edition of our *Histoire de la Philosophie Medievale*, of which the first French edition appeared in 1900 and the second in 1905." In this, as in the second edition, he aims to "place in their proper historical setting the numerous philosophical systems of the Middle Ages and to trace their mutual doctrinal relations." Following a plan similar to that chosen by Brother Azarias, in 1887, in his *Essay on Aristotle and the Christian Church*, Dr. de Wulf has written a painstaking, scholarly work, which may be described as both genetic and critical in method. By emphasizing the genetic trait, "in approaching the history of medieval philosophy by an introductory outline of Grecian philosophy," he helps the student to see how the great minds of the medieval period came to be influenced by characteristic principles and imbued with distinctive views. In the thoroughness and impartiality with which he develops his critique, he shows what permanent contributions these philosophers have made to the world of fundamental thought. While, as a faithful historian, he must and does record the body of doctrine common to the great medieval teachers, he likewise sets forth at unusual length and with striking clarity "systems of other inspirations and tendencies." These he ascribes to *non-scholastic*, rather than *anti-scholastic* philosophers, and he devotes no inconsiderable part of the book to tracing their influence on the main stream of thought in the Middle Ages. In this way, he succeeds in producing in the reader a frame of mind congenial to profitable study. An atmosphere of thoroughness pervades the work; a conviction is formed of the author's intellectual honesty, of his intense desire to get at the truth.

His reading, too, has been comprehensive; and, while he disclaims any

attempt at a complete bibliography, he has striven to present a list of the most valuable references. American readers will be interested to find that he includes (p. 117) from Baldwin's *Dictionary of Philosophy and Psychology* Professor Dewey's article on "Scholasticism," which he bluntly characterizes as "weak," and Perrier's *Revival of Scholastic Philosophy*, which he finds agrees with many of his views and conclusions.

A vital topic is naturally the historical development of the "Question of Universals" (pp. 149 ff.). The "sweet reasonableness" of the question is set forth clearly in the following terms: "The problem of the Universals is none other than that of the *truth*, or *objective reality*, of our intellectual knowledge. While the data of our sense-perceptions are manifold and individual, the object of our intellectual representations is abstract, universal and independent of all individualizing conditions or determinations. The question is, whether such intellectual conceptions are faithful; whether they correspond adequately with the external objects which give rise to them in our minds; whether, therefore, they teach us anything about what exists outside our minds." In this extract there is only one word to which exception might be taken, and that word is *adequately*. Its use might lead the hypercritical, perhaps even the critical, to infer that no intellectual knowledge is true, or objectively real, unless it *exhausts* the object. This, however, is far from being the view of either Professor de Wulf or the best medieval philosophers. Both hold that the sole requisite is that, *so far as it goes* in its delineation of traits, the intellectual conception should be faithful to the reality. It need not represent *all* the traits; it rarely can do so.

In tracing the history of the question from Porphyry, Dr. de Wulf is disposed to rate less highly the tentative solution offered by Boethius than does Vallet in *Histoire de la Philosophie;* on the ground that Boethius himself seemed to be uncertain of its value. Nevertheless, it is worthy of note that the solution finally worked out in the thirteenth century had been suggested seven centuries earlier by the 'barbarian philosopher.'

The critical value of Dr. de Wulf's work is discernible (1) in its logical development, which even the table of contents reveals; (2) in the variety and distribution of type in the text itself, serving to indicate the relative importance of the matter in the mind of the author; (3) in the care with which he leads up to his "conclusion" on the philosopher's real influence on subsequent thought. While this is most conspicuous in his treatment of St. Thomas of Aquin (pp. 306–347), yet it appears also in the brief study of John Scotus Erigena (pp. 167–173) and in the sections given to both Abelard and Gilbert de la Porrée (pp. 191–198) and John Duns Scotus (pp. 367–379). Probably for pedagogical, or psychological, reasons, he

frequently *prefaces* his consideration of a philosopher's doctrines with a brief statement as to his influence, almost reversing the order adopted in Turner's *History of Philosophy*.

His discriminative power is well shown in his attempt (1) to discover from documents the *real teaching* of Abelard and William of Champeaux on the question of Universals; (2) to determine doctrines first advocated by Albert the Great, but often attributed to his more illustrious pupil; (3) to separate the wheat from the chaff in Alexander of Hales and Roger Bacon; and (4) in a word, to determine accurately the limitations of each of the great philosophers. He proclaims Albert to have been "the greatest scientist of his time" (p. 301). We would have been glad to see this statement illustrated with more specific indications of Albert's versatility and fondness for experimental work. Such a development would have added cogency to the last section in the book. Indeed, it would not have been amiss to state that the philosopher of Bollstädt was the first to use the term *affinity* in our modern chemical sense. The author misses likewise the impressive pedagogical lesson given in Turner's *History of Philosophy* in contrasting Albertus Magnus and Roger Bacon as philosophers and as scientists.

It was a happy thought to extend the history to the seventeenth century, the age of Descartes, who has been somewhat dramatically styled the "Luther of Philosophy." Indeed, one of the best sections in the whole book is that (pp. 486–488) which, after deploring the ignorance of scholastic teaching in this century, expresses the leading characteristics *of this period* in these terms: (1) "The attitude of the scholastics towards their adversaries cannot be condoned"; (2) "the scholastics neglected contemporary philosophy; both its attacks on themselves and its own systematizations"—many of them deliberately avoided studying the new theories; (3) "the scholastics also held aloof from the progress of the sciences." This indictment is almost crushing in its severity; yet the reader should not forget that Dr. de Wulf, in the preceding pages, has so clearly set forth what is best in scholastic philosophy that he is filled with righteous indignation at the blindness and the temerity of the men who in that age sought the protection of its name and fame.

Complementary to this is the very last section in the book (pp. 501–506) entitled "The Misunderstanding between Scholastics and Scientists in the Seventeenth Century." The final paragraph deserves to be quoted:

"The conflict between philosophers and scientists in the seventeenth century did not really touch the substance of scholasticism, but only secondary points and side issues. But the misunderstanding was, in the circumstances, inevitable; and it lasts down to the present day. The

scientists and scholastics of three hundred years ago are responsible for it; the scientists tried to fell the giant oak on the plea that it bore some rotten branches on its crown; the philosophers foolishly shrank from touching its hoary brow, lest by removing a withered twig they might deprive it of its life. "Scholasticism succumbed for want of men, not for want of ideas."

The translator deserves great praise for the excellent manner in which he has acquitted himself of his task.

The book should be well thumbed by students of philosophy. In it they will find, perhaps to their surprise, the germ and even the development of more than one theory supposed to be the peculiar product of our own day.

BROTHER CHRYSOSTOM.

MANHATTAN COLLEGE.

NOTICES OF NEW BOOKS.

The Moral Life. A Study in Genetic Ethics. (Vol. I of *Library of Genetic Science and Philosophy.*) By ARTHUR ERNEST DAVIES. Baltimore, Review Publishing Co., 1909.—pp. xi, 187.

This work is described by the author as "an attempt to determine, in the light of recent advances in psychological knowledge, what are some of the more important and fundamental characteristics of the moral life" (p. vii). More precisely, it attempts to elucidate by psychological methods "the principles through which the moral life gets its organization, and by which it attains its development." The treatment is to be regarded as strictly scientific, belonging only to the prolegomena to moral philosophy; and it is distinguished from evolutionary ethics (which is likewise scientific), in that, while the latter seeks merely to trace out an historical development and to formulate laws which apply to the process as a whole, genetic ethics endeavors to analyze the moral situation so as to exhibit its distinctive elements and their various functions.

The task which Professor Davies undertakes is certainly of prime importance. There has been no thoroughgoing investigation of the factors of moral evolution. The present work is thus able to appeal at the outset to an intense scientific interest. I find, however, that despite a considerable display of courage, energy, and balance of judgment, the performance is throughout disappointing. In the first place, the author keeps his facts too much at arm's length. Such a work as the present, unless supported by an ample induction, can amount to no more than a series of suggestions; and this work is a mere manipulation of concepts from beginning to end. One feels time and again that there is something behind the conceptions. The illustrations appended to some of the general statements are uncommonly good. But beyond these very little of the concrete has found its way into the book. It is perhaps to forestall criticism that the author writes: "It is not, however, a contribution to the phenomenology of ethics" (p. vii). But whether one proposes to add to the catalog of facts or not, one must have facts to substantiate one's theories in the reader's mind as well as in one's own.

In the second place, even admitting the conceptional machinery, the fundamental problem raised in the book is not adequately treated. "I have omitted," says the author, "whatever does not directly bear upon a better understanding of the moral ideal—a conception which, I hold, is fundamental to every moral situation, and without which no rationalization of the moral life would seem to be possible" (p. x). But the direct exposition of this concept amounts only to saying that a constructive ideal is necessary in every science; that ideals are called for when empirically given data no longer suffice for the control of conduct, and perception is accordingly supplemented by

imagination; that ideals in general may be defined as contents that expedite and direct the growth of experience; and that the moral ideal is peculiar in that it consciously functions for a common end throughout the entire social group in which it develops. Now when we examine into these (wholly unsupported) generalities, we find that the very question in which we are most interested has been forgotten. Nothing is said as to the logical or psychological constitution of a moral ideal—except that it requires imagination—or as to the interplay of factors by which it is maintained and developed. There is, to be sure, a general statement of the function which it performs and which may be supposed to determine its evolution; and there is a discussion running through several chapters, of the manner in which, at various grades of mental development, the moral ideal functions in the control of conduct. But the existence of the ideal, as an epistemological instrument for the interpretation of certain classes of situations, is, however inconsistently, taken for granted throughout. As the author expresses it, the problem in this portion of the work is: "How the Moral Ideal works out to moral results" (p. 155, n.). The main promise of the work is left unfulfilled.

Professor Davies's general standpoint in ethics is taken, as repeated citations show, from his former teacher, Professor Ladd. It is not one that admits of very much scope for scepticism. "Doubtless, moral requirements are unconditional. This is recognized not only in theory, but in practice, and not merely in any one age or civilization but in all. It was this that Socrates, for example, remarked. There was nothing, according to him, no impulse or passion, so strong that it could divert the individual from seeking to realize the good once it had been conceived. The uniqueness of the fact is impressive, and among ethicists attempts have been made, not to question, but to elucidate it" (pp. 109, 110). Apart from the confusion between the unconditionality of obligation and the absoluteness of its control of conduct, the historical generalization is not likely to pass unquestioned.

As a general rule, I do not think that animadversions upon the style of a scientific work are in good taste. But in this case justice requires that an exception be made; for the style of the present work is so befogged, that I have very likely not fully appreciated the content. Perhaps the author himself has not always been sure what he was saying, as the following reflection upon evolutionary ethics would seem to show. "The success which has attended its more ambitious aims, for example, to render a complete and final account of moral phenomena, must be judged by the results it has attained." If a meaning is read into this tautology, how will it harmonize with the immediately following statement? "Our own opinion is that it has not superseded, and *in the nature of the case cannot supersede*, the philosophical interpretation of the same material" (p. 6, italics mine). It will be seen that even after a careful study of so poorly written a work, the reader may well doubt his ability to do it justice.

I fancy that the main source of Professor Davies's difficulties both in thought and in expression lies in those recent advances in functional psychology which

he has attempted to utilize. It is always an embarrassing task to work over an old field in the light of new conceptions. The strange forms which truisms may take often lead one to imagine that one has had important revelations. And, worse than that, the very cumbersomeness of the new modes of speech so limits one's freedom of expression, that allowance cannot be made for even important distinctions, and thus an effect of crudity is almost unavoidably produced.

THEODORE DE LAGUNA.

BRYN MAWR COLLEGE.

Philosophische Reden und Vorträge. Von CARL STUMPF. Leipzig, Johann Ambrosius Barth, 1910.—pp. 261.

This is a collection of essays, all of which, with the exception of the first, "Die Lust am Trauerspiel," have previously been printed separately. The first essay is a very interesting discussion of the reasons for the enjoyment of tragedy. Professor Stumpf defines tragedy as a drama whose hero perishes through a combination of personal qualities and of external fate which far transcend the ordinary lot of mortals. The basis of our enjoyment of tragedy is *Mitfuehlen*. We suffer with the hero and, in following his career, we are lifted out of the commonplace and work-a-day world into a realm where character and fate in their meeting are majestic and sublime. The sublimity of tragedy is the morally sublime. Its culmination is the death of the hero. The most significant after-effect of seeing or reading a great tragedy is the moral and religious elevation of spirit which comes from the feeling that in witnessing the tragic display of human fate we have touched the deepest mystery of existence, that we have come into contact with the dark and unfathomed source and ground of the spiritual life.

In the second essay, "Leib und Seele," Professor Stumpf criticises the metaphysical monistic forms of the parallelism theory. He holds to the dualistic position. In the third essay, "Der Entwicklungsgedanke in der gegenwaertigen Philosophie," after tracing the development of the evolutionary theory and doing justice to its profound and fructifying influence, he points out some of its philosophical implications. The appearance and development of consciousness is conditioned by the appearance of new complexes in the physical organism, but the latter do not really account for the former. Moreover, the whole question of a teleological interpretation of evolution is on the boards. Stumpf argues for the validity of a purposive reading of the evolutionary process. He recognizes the difficulties involved in the dysteleological facts of nature, the evolutionary problem of evil, but is, nevertheless, inclined to hold that the whole process of evolution implies a transcendent unity and ground, the absolute and cosmical "organism." In conclusion he discusses the question of historical progress and insists on the central place which must be given to the process of historical culture-evolution in interpreting the cosmical process as a totality.

The next essay, "Zur Methodik der Kinderpsychologie," is a very clear and sane exposition of the right methods and the limitations of child psychology.

In the essay, "Die Wiedergeburt der Philosophie," Professor Stumpf takes a very hopeful view of the future of philosophy as the supreme synthesis of knowledge. He looks for a philosophical genius who shall combine a mastery of the mathematical and natural sciences, such as Leibniz in his day possessed, with the moral and spiritual insight of a Kant. Stumpf's sympathies are evidently with objective idealism. "Vom Ethischen Skeptizismus," is a refutation of the sceptical inferences as to the validity of moral principles which are drawn from comparative ethics or Völkerpyschologie. In noble and inspiring words Professor Stumpf calls on his student hearers to value duty above life. He shows that variations in moral standards do not imply the unreality of objective moral values, but only their evolution in relation to the complex factors of civilization. The good and duty are in their actuality always individual and concrete, but the obligation to seek the good and to do one's duty are universally valid.

Having no knowledge on the subject I refrain from commenting on the final essay, "Die Anfaenge der Musik."

J. A. LEIGHTON.

HOBART COLLEGE.

Le Problème moral et la pensée contemporaine. Par D. PARODI. Paris, Félix Alcan, 1910. —pp. 210.

If the title of this little book is rather too large for its contents, the reader is soon set right in his expectations by the author's modest preface. The volume consists of four critical studies and a supplementary essay designed to gather up the positive conclusions of the preceding critical studies and to define a little more precisely the author's point of view. He does not sympathize with the present tendency to regard ethics as a dependent science founded upon biology, sociology, or psychology. He is an ethical rationalist who adopts the older Kantian attitude and insists upon the independence of ethics. The ultimate foundation of morality is the idea of good or of duty, which is nothing more than the affirmation of the value of reason itself. But it is impossible to derive any particular obligation from the notion of moral law, and the notion of good appears vague and indeterminate. Neither pleasure nor utility nor perfection nor happiness can furnish matter to morals. All ethics must be purely formal; it is that or nothing; it is a method and not a science, and a material ethics is impossible.

One may doubt whether the 'great success' of Metchnikoff's exceedingly interesting *Études sur la nature humaine* raises any presumption as to its philosophical importance, and whether it really entitles him to be chosen as the representative of biological ethics. If the fear of death is as terrifying an obsession as M. Metchnikoff believes (which I greatly doubt), one might be pardoned for regarding as a scientific joke the attempt to construct an optimistic philosophy on the basis of a possible prolongation of life by the removal of the large intestine and a diet of sour milk *plus* a hypothetical development of the 'instinct of death,' which would perhaps be sufficiently accounted for

by the regimen adopted as a recipe for longevity. M. Parodi, however, is far too polite as well as too fair a critic to treat any one with such levity, and he devotes the first chapter ("Morale et Biologie") to an exposition of the insufficiency of Metchnikoff's physiological ethics.

The gist of Chapter II ("Morale et Sociologie") is the familiar criticism of sociological or 'positive' ethics to the effect that the science of morals is different from theoretical ethics and that the scientific explanation of an institution or a moral rule is one thing and its rational justification another; and that it is not quite obvious how a 'rational art of conduct' such as M. Lévy-Bruhl proposes, can be founded on a science of morals which simply accepts and describes the given moral facts and at the time denies that they can be either modified or justified. The most interesting part of the chapter, however, is the author's criticism of M. Durkheim's departure from the position of the ordinary sociological moralist who frankly gives up the idea of moral obligation and abandons the attempt illustrated by Metchnikoff to found a new morality on scientific principles. Durkheim, the leader of the newer sociological school, shows originality in claiming to reconcile the categorical character of duty with its radical relativity. He wishes to restore the Kantian conception of morality as obligatory. Rules of conduct present themselves to us as imperative simply because they are rules. The moral is the obligatory. This is what 'moral' means. But it is impossible to justify the rules of conduct, "*Nous ne savons pas, au fond, le pourquoi de la famille, de mariage, du droit de propriété, etc.*" There is, *e. g.*, no rational justification for the prohibition of incest. We can only explain the existence of the moral rule by tracing its origin to some absurd superstition. M. Parodi very properly asks whether a moral rule could still maintain its obligatory character when it was seen to be without any rational justification. For Parodi, moral means obligatory, but obligatory means reasonable.

Having made excellent use in Chapter II of the criticisms directed against the sociological school by MM. Belot and Fouillée, M. Parodi in the next two chapters discusses Belot's *Études de morale positive* and Fouillee's *Morale des idées-forces*. The former of these is an important work, and deserves to be better known. Belot combats both the Kantian formalism and the purely sociological conception of morals. Parodi regards his criticisms of pure 'sociologism' and of ontological ethics as convincing; he also accepts the sociological induction which represents moral rules as laid down in favor of the social interest. He does not think, however, that such a conception contradicts that of a morality which imposes itself upon the individual conscience in the name of its rationality alone, since it is on the present social utility of moral rules and not upon their traditionally imperative character that reason will found the reasons for obeying them. Parodi denies as emphatically as Belot that one can deduce moral rules *à priori*. To affirm that the different moral rules can be explained and justified only from the point of view of their social utility, cuts short all attempts at ideological construction and renders impossible the effort to deduce the matter from the form of morality. But

to take the attitude of disinterestedness, impersonality, and objectivity which morality presupposes, and which is demanded of the conscientious man who makes social utility the end of his conduct, is to admit that the morally good is defined by its rational form. Apart from this moral attitude there are customs or morals (*des mœurs*) but no morality. Hence, of the two elements which, according to Belot, characterize morality, viz., utility and rationality, the former must be subordinated to the latter, and Belot really comes nearer to pure moral rationalism than he himself admits. Moreover, since whatever appears to the conscientious man as rationally convincing will appear to him also as rationally imperative, it is not true that the idea of moral obligation must be or can be abandoned.

I must pass over the chapter entitled *La moralité, le bien et les biens* with the remark that while the critic speaks very appreciatively of M. Fouillée's work, he thinks that it adds nothing essentially new to ideas that the author has often expressed before, though less connectedly. Nor do I think this chapter adds anything to the understanding of M. Parodi's position. The whole book, however, is well worth reading for its clear exposition and sane criticism of the works of a number of leading French writers representing different current ethical tendencies.

GEORGE S. PATTON.

PRINCETON UNIVERSITY.

Das Erkenntnisproblem und seine kritische Lösung. Von BERTHOLD KERN. Berlin, August Hirschwald, 1910.—pp. 195.

This work of Kern is distinctly an effort to treat the problem of knowledge from a logical standpoint. In this respect it belongs beside the works of Natorp, Riehl, and others who have been inspired by the inexhaustible wealth of Kant's critical writings. Kern has the customary contempt of the modern German epistemologists for metaphysical questions, and accordingly tries to confine himself entirely to the explanation—to him the simplification—of the 'given experience.' In these efforts to simplify, his purpose is everywhere to make gray and indifferent concepts which are ordinarilly contrasted. This seems more important to Kern than to construct a carefully articulated epistemology which might well serve as the basis of a metaphysics and a philosophy of the empirical sciences. In a sense, however, this last comment is too severe, for the reader feels that, in spite of these limitations, Kern has struck into the very heart of the problem of knowledge. That, having comprehended this problem, he has tried to simplify it is perhaps the greatest merit of his work.

One cannot get a better idea of the import of Kern's theory of knowledge or understand the spirit of his point of view, than by following through in detail the various sections. Frequently the reader loses sight of the whole in the labyrinth of detail, much of which requires a broad perspective, just as many of the dialogues in Mr. James's stories become clear only when the whole episode is in mind. Kern thinks the greatest contribution of Kant to the general Theory of Knowledge lies in the 'ready-madeness' of the descriptive

concepts with which our crude experience is made over into knowledge. Kant's greatest defect, we are told, lies in the effort to make these concepts transcendental, an effort which leads easily into the dualism of an inner and an outer world. Kern casts aside all innate ideas and spiritualistic principles as useless complications; he also casts aside all dualistic and pluralistic implications as neither necessary nor pertinent to the theory of knowledge. The central pivot of Kern's work is this group of ready-made descriptive concepts. It is by these that we build our consciously conceived universe out of the raw, uncategorized elements of experience. The general character of these descriptive-concepts is illustrated by such terms as sensation, perception, and thought. These concepts have merely a logical reality, as the presuppositions or conditions of our power to weave facts into a system of knowledge. This system of knowledge, thus built up or constituted through these descriptive-concepts, is therefore purely a logical construction, postulated for the practical purposes of our ordinary living. The organized world of perceptual and conceptual knowledge centers about the shifting ideas and purposes of our every-day practical life. Knowledge becomes organized that living may have a cosmos. The highest purpose of this practical living is the desire for unity, for an homogeneous, intelligible universe. Unity is the supreme conceptual postulate, underlying and determining all thought activity.

Kern cuts the Gordian knot of the relation between the physical and the psychical by throwing both back on a background of mere logical identity. On this background the various descriptive-concepts mark off and bring into focus the difference between objective and subjective facts, which difference custom only has made us believe to be final. One portion of this background we consider physical through the use of one set of descriptive-concepts; another portion we consider psychical because it is constituted through another set. Between the two ranges lies an indeterminate marginal zone. Apparent differences in the constituent elements of knowledge are therefore merely logical, in no sense are they to be considered actually real. In this unifying mode of treatment—where the only differences are functional and not structural—a fact as the element of our world that needs description may be considered either physical or psychical according to the nature of the special set of descriptive-concepts we choose to employ in describing it. And, furthermore, these descriptive-concepts are themselves determined by the practical situation immediately before us. Kern thus feels himself in a position to make full use of his two-sided system of concepts. He speaks at one moment in terms of idealism, at another in terms of materialism, yet at the same time he cautions us to remember that beneath this "thought and speech" dualism lies the fundamental logical unity of conceptual knowledge and actual fact. "Dass es für uns beides gibt, verdanken wir unserem doppelseitigen Begriffssystem, welches wir weder dem Idealismus noch dem Materialismus opfern dürfen. Aber ebensowenig dürfen wir diesem Begriffssystem die Einsicht opfern, dass Erkenntnisinhalt und Wirklichkeitsinhalt ein und dasselbe sind" (p. 115).

The various concepts with which we organize experience are themselves

either descriptive concepts or else their immediate products. On the physical side of the field, when we deal with the "space represented" elements of experience, stand such concepts as substance, thing, force, energy, scientific law, and the like. When experience can be described without the use of space concepts then the fact is psychical. Some facts, however, can be described by either set of concepts. These pertain therefore to a kind of marginal zone —Uebergangszone—a logical 'pineal gland' which mediates between the two sets of descriptive-concepts, permitting physical to be transformed into psychical and psychical into physical. This marginal zone is the fulcrum which makes possible the solution of the problem of knowledge. On the psychical side of the zone the psychical concepts operate—sensation, perception, and thought. These are essentially identical except in the relative abstractness of their conceptual products. The Ego is a highly conceptualized product of description. It is in itself without absolute value; it is a presupposition of the organizing activity of the various psychical descriptive-concepts which demand a spaceless and timeless core upon which to attach their various practical values. Joy, fear, love, and similar concepts represent these practical values having their center in the ego. And, finally, consciousness itself is nothing else than a kind of ready-made index of our whole mental activity. It is a process which dissolves away the moment we attempt to crystallize it about its own inner center of activity.

Thus briefly described the theory of knowledge of Kern appears as a carefully worked out system. It is a very subtle attempt to describe knowledge in terms of logical form, without becoming unvolved in the quagmire of metaphysical distinctions. Kern notes with regret that Schelling's identity of nature and spirit is "nur im Absoluten" (p. 65); he would make this identity everywhere. But has he succeeded in accomplishing this result by refusing at the very beginning to consider all metaphysical questions? There is undoubtedly a separable theory of knowledge, distinct from other branches of philosophy, yet it has not now acquired either such scope or such authority that it can cast aside all consideration of the ultimate value, the real nature of its postulates. In Kern's case the hypothetical identity of the physical and the psychical in one vague logical continuum explains not the least the keys and wires of the whole system. If we grant to him his logical mechanisms, Kern is able, of course, to develop a well rounded and closely jointed theory of knowledge. Yet these postulates are, at the last analysis, justified in terms of their own reality or else in terms of the finished product. But Kern foregoes all considerations concerning the postulates of his theory of knowledge and then makes postulate and completed process so play into each other that no objective test is possible. Any theory of knowledge can be manufactured according to such a plan.

This work of Kern, as well as that of other German and American epistemologists, focuses our attention on a very pertinent matter. It is the relative distinctness of the theory of knowledge from other branches of philosophical enquiry. We all recognize that Kant's investigation into the nature of knowl-

edge was a prelude only to his efforts to state the kind of reality to be ascribed to its presuppositions. Understand the conditions of knowledge and we take the first step toward understanding the nature of reality. Kant saw this clearly. In the spirit of this he made the deduction of the categories of the second edition of the *Kritik of Pure Reason* more epistemological and less purely psychological than the deduction of the first edition. But modern writers on the theory of knowledge fail to make the position of their problem, its postulates and its corollaries, clear to us. They have made it fairly distinct from psychology; now we should like to know whether the problem of knowledge is a part of metaphysics, perhaps an adjunct, or a field of enquiry quite distinct in limits and character. Can we discuss the conditions of knowledge without interesting ourselves in the nature of the predicates to be ascribed to the reality of its postulates? If so, then we cannot, as Kern and others so often do, bring in metaphysical considerations through the back door.

ARTHUR S. DEWING.

HARVARD UNIVERSITY.

Das Gedächtnis. Die Ergebnisse der experimentellen Psychologie und ihre Anwendung in Unterricht und Erziehung. Von MAX OFFNER. Berlin, Reuther und Reichard, 1909.—pp. 238.

The author's purpose is to summarize the contributions made during the last twenty years by experimental psychology to our knowledge of memory. As the book is intended primarily for teachers, it contains many applications to pedagogy. The general psychological standpoint of the author is Lippsian with a strong Herbartian flavor. Among the various data discussed the following seem to have especial significance.

Every sensation or perception—according to Offner's somewhat cumbersome terminology—sets up a latent functional disposition for its ideational reinstatement or reproduction which becomes actual by means of associational co-excitations acquired in the course of experience. The only law of association which modern psychology has found to be valid, states that simultaneous mental processes leave behind them a tendency toward subsequent reproduction and a disposition for mutual recall. These two dispositions for recurrence and associational recall may be formed and strengthened even among subliminal excitations as well as among non-contiguous members of a conscious series. In the latter case, the larger the number of intermediate members, the weaker, other things being equal, will be the associational disposition. Progressive associations (*a-b-c*) are, as a rule, stronger than regressive (*c-b-a*). The strength of the dispositions for recurrence and recall may be measured by various experimental methods. This strength is found to be directly proportional to the intensity, duration, attentive vividness, and number of repetitions of the mental processes. The number of repetitions saved in the process of relearning 24 hours after the first learning is, on the average, one of the former to three of the latter. The effect of successive repetitions for memory decreases at first rapidly, later almost imperceptibly. Longer series require

relatively much more time and a greater number of repetitions than shorter series. The more the repetitions are distributed over longer periods of time, the more effective do they become for memorizing. If two associations are of equal strength but of different age, the older will profit more by each new repetition than the younger. Again, if the material to be memorized is of uniform difficulty and not of too great length, it is acquired sooner if learned as a whole than if broken up into small units. Unpleasant experiences are more easily remembered than pleasant ones, but learning while in a pleasant frame of mind is much more effective than learning during a depressive mood or during other abnormal physical and mental states. At first the process of forgetting progresses very rapidly, so that after eight hours more than half is lost, while later on, days, months, and years make but little difference in the amount forgotten.

A large section of the book is devoted to reproduction as a motive that induces the actual functioning of the dispositions of recurrence and recall. The reaction time necessary for the reproduction of one mental process by another is on the average .6 sec. It varies greatly, however, with the strength, age, and readiness of the disposition, with the subject's attention, emotion, freshness or fatigue, and age. What particular dispositions are realized in any given case, depends to some extent upon the factors just mentioned, and partly also upon the subject's present mental pre-occupation—for example, a certain task set to him—and his general mental make-up, his memory type, upon sex, and the method of learning. The questions of development, improvement, and decay of memory have not been sufficiently studied to permit of a statement of definite and generalized results. Six pages of bibliography including the most important theoretical and experimental works on memory form a valuable appendix.

L. R. GEISSLER.

CORNELL UNIVERSITY.

Attention and Interest, A Study in Psychology and Education. By FELIX ARNOLD. New York, The Macmillan Company, 1910.—pp. 272.

The purpose of this book is "to clarify and arrange the many facts" brought to light by experimental psychology. Notwithstanding his intentions to be impartial, the author has emphasized the biological or functional point of view. This, however, is natural, as the book seems to be intended primarily for students preparing to teach, while students of pure psychology will find other works on attention more profitable.

The subject-matter of each chapter in the first and second part is treated under the categories 'description,' 'illustration,' 'development,' and 'explanation.' The illustrations consist of quotations from English literature and of directions for short, easy experiments, taken mostly from standard textbooks. The exposition under 'development' and 'explanation' often requires an arbitrary separation of materials closely related. In the first half of the book the text is sometimes unnecessarily crowded with tables, figures, sche-

matic drawings, and diagrams. Numerous footnotes refer the reader to some of the best psychological, physiological, and pedagogical works written in, or translated into, the English language.

The first part deals with the different aspects of attention. Under the objective aspect, the phenomena of clearness and distinctness, persistence, fluctuation, unity, facilitation, and arrest are described, illustrated, and explained. The psychophysical aspect treats, in the mental side, simple assimilation, free association or revival, and deliberation; on the neural side, the three levels of the sensori-motor paths. Organic changes of respiration, vasoconstriction, and circulation, sensory accommodation and fixation, motor diffusion, innervation, and control, and fatigue, constitute the physiological aspect of attention.

The second part of the book deals with the motor and ideal aspects of interest. Interest is defined as "an attitude taken towards a situation, and characterized, (1) by motor tendencies and feelings of expectation, anticipation, and strain, (2) by meaning implicit in the situation or by free images and ideas, and (3) by a reference or attitude and ideal content to some future condition of the self." Curiosity, expectation, and conscious desire are described as the three kinds of interest.

In the third part, educational principles for practical application in the classroom are derived from the facts of attention and interest.

L. R. GEISSLER.

CORNELL UNIVERSITY.

David-Frederic Strauss: La vie et L'œuvre. Par ALBERT LEVY. Paris, Félix Alcan, 1901.—pp. 295.

In this book we have an account of the life and works of David-Frederic Strauss which, although critical, is still sympathetic and appreciative in tone. The work of Strauss is frequently said to be unimportant because he lacked originality, and hence failed to make any positive contribution to the philosophy of the nineteenth century. But our author here reminds us that a writer who understood the great intellectual movements of the nineteenth century so well that he was in many cases better able to express them than were their originators, deserves to be remembered as a foremost representative and interpreter of the thought of the time. Moreover, a certain sort of originality may be claimed for Strauss; for at two critical periods marked by widespread uncertainty and confusion of thought, along with not a little insincerity and evasion, he dared to say the decisive word needed to define the issues and prepare the way for a new formulation of religious truth: in 1835 when in his *Leben Jesu* he declared the gospel accounts to be mythical, and in 1872 when he asserted in his *Der alte und der neue Gläube* that the new evolutionary science compels us to abandon the old faith for a new doctrine.—It was Strauss's main thesis that the eternal life of spirit possesses a reality superior to that of the natural process in time. This absolutism prevented religion, always the absorbing intellectual interest of Strauss, from exerting an effective and in-

spiring influence in his life. For such absolutism always tends to discourage effort and to separate the interests of religion from the cause of human progress and social evolution.

HENRY W. WRIGHT.

LAKE FOREST.

Le problème de l'action. Par GUSTAVE RODRIGUES. Paris, Félix Alcan, 1909. —pp. iv, 203.

This work is an essay on the methodology of practical ethics, in which the author attempts to indicate a fruitful method of dealing with moral questions. His aim is not to give a system, but to demonstrate that morality is an accomplished fact. Morality depends upon man's relations with his fellows. Without possible conflicts of wills, morality loses its point. It consists neither in abstractions nor in an isolated conscience; that hypothesis involves a contradiction. Conscience is a function of the environment which acts upon it and upon which it reacts. Morality is a man in the presence of another, one will in conflict with another will (p. 13). The book contains a preface and seven chapters with the following headings: "Le problème de l'action," "La pratique morale et les pratiques matérielles," "La conscience et les espèces," "Le criterium moral externe: l'impératif catégorique," "Le criterium moral interne: l'intime conviction," "Les contradictions internes de l'action: les conflits de devoirs," "Les contradictions externes des actions: les conflits de doctrines."

One can only indicate in a very inadequate way some of the conclusions arrived at in this interesting and well-written book. The author is particularly interested to discover how the moral problem appears to conscience at the precise moment when decision is made. Morality, in its essence, is found to be a kind of restraint, an ideal jurisdiction, and the sphere of morality, though wider, has the same point of view as the sphere of law. "En leur essence, ils sont fondamentalement le même: juridique ou morale, il y a toujours une obligation et il n'y a jamais qu'une obligation" (pp. 7–8). Conscience is an internal judge and lawgiver whose business consists in settling moral conflicts. "La conscience est un code intérieur qui légifère à sa façon et un juge intérieur qui applique la loi par lui-même prescrite" (p. 6). But moral conflicts can arise only in a subject conscious of his defects as well as of his ability and duty to rise to better things. "L'homme est moral parce qu'il n'est qu'une partie de ce qu'il vent être, parce qu'il se contraint à être plus que ce qu'il est" (p. 11). The saint who has not had moral conflicts is no more moral than is the animal that follows his natural tendencies.

The internal conflict of different forms of obligation is, in general, found to be a battle between the past and present. It is due to the antagonism between old principles on the one hand and new ideas on the other. Hence the morality of the individual is made up of gropings and approximations (pp. 149–151). In much the same way the author explains the diversity of moral conceptions. Morality is relative and, in its evolution, appears as a

progressive substitution of ideals. The different moral types mark the different stages that have appeared during the process (pp. 197–198).

G. W. T. WHITNEY.

PRINCETON.

Les Problèmes de la science et la logique. Par FRÉDÉRIC ENRIQUES. Translated from the Italian by J. DUBOIS. Paris, Félix Alcan, 1909.—pp. 256.

In his *Problemi della Scienza* Enriques offers a critique of problems relating to the logical and the psychological development of scientific knowledge. The first part of that work is concerned with the more general problems of the logic of science; the second part discusses the concepts of geometry, mechanics, physics, and biology. The French volume under review is a translation of the first part of the Italian book.

The aim of the author is to unify the various domains of knowledge by means of a "positive science of gnoseology," an epistemology dominated by a spirit "critical and positive." First, then, there is no absolute, either in mathematics, or in natural science, or in morals, or in metaphysics. Consequently, everything being only a linking of relatives, there are no insoluble problems. There is no 'reality in itself.' The 'positive' definition of the 'real' is, according to Enriques, the correspondence between sensations and desired results. More technically, the 'real' is the invariant in the correspondence between volitions and sensations. This definition is followed by a detailed examination of the nature of psychological, physical, astronomic, chemical, and historic 'facts.' Theories are distinguished from facts in that theories often involve fictitious entities which are inserted *within* the series of facts solely as heuristic devices. They are, therefore, highly subjective. This distinction between facts and theories is illustrated by a survey of several standard theories of natural science, and by discussion of the concept of equivalence of scientific hypotheses.

So much for the basal principles of the "positive gnoseology." These principles, however, involve a tacit understanding as to the meaning and the application of logic. To these problems of logic the remainder of the book is devoted.

Logic to Enriques means, as it should mean to all students of philosophy, not the Aristotelian tradition, but the twentieth century science; the modern logic of Schroeder, Peano, and Russell. Though in this connection the author's use of 'logical' and 'psychological' seems somewhat confusing (a confusion to which current philosophic literature should have made us callous), his résumé of the technicalities of mathematical logic—logical operations, logical definition, the compatibility of postulates, and the foundations of arithmetic—is both concise and clear.

How do logical concepts apply to reality? This question is answered only after a careful inquiry into the precise meaning of such concepts of physical science as 'matter,' energy,' and 'cause.' The resulting induction the author formulates thus: exact logical concepts apply to reality only in a relative and

non-rigorous fashion. "The progress of science is a series of successive approximations." In this succession of approximations certain general concepts like those of geometry and of mechanics serve as somewhat less variable, but by no means absolute, directing principles.

The book concludes with some purely tentative hypotheses relating to the physiology of the thought processes.

The constructive view of the principles of science presented in this volume compares favorably with views like those of Pearson and of Poincaré. Against Pearson, Enriques insists that the formulations of science are not merely subjective 'shorthand'—there *are* objective facts. Against Poincaré Enriques argues that the principles of science are not 'conventions,' but rather "progressively determined suppositions."

An English rendering of both parts of the Italian work will be welcome.

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The following books also have been received:

Theories of Knowledge. By L. J. WALKER. London and New York, Longmans, Green, and Co., 1910.—pp. xxxix, 696.

Principles of Political Economy. By JOHN STUART MILL. Edited by W. J. ASHLEY. London and New York, Longmans, Green, and Co., 1909.—pp. liii, 1013.

An Outline of Logic. By B. H. BODE. New York, Henry Holt and Co., 1910. —pp. x, 324.

The Complete Works of Friedrich Nietzsche. The first complete and authorized English version. Edited by OSCAR LEVY. Vols. I, II, III, VI, VII, IX. Edinburgh and London, T. N. Foulis, 1909.—pp. xxxviii, 204; xii, 201; xxix, 194; x, 170; xiii, 407; xiv, 384.

The Psychology of Reasoning. By W. B. PILLSBURY. New York and London, D. Appleton and Co., 1910.—pp. viii, 306. $1.50.

The Influence of Darwin on Philosophy and Other Essays. By JOHN DEWEY. New York, Henry Holt and Co., 1910.—pp. vi, 309. $1.40.

Kant's Ethics and Schopenhauer's Criticism. By M. KELLY. London, Swan, Sonnenschein & Co., Lim., 1910.—pp. 208.

Vocational Education. JOHN M. GILLETTE. New York, American Book Co., 1910.—pp. viii, 303.

A Critical Study of Current Theories of Moral Education. By J. K. HART. Chicago, The University of Chicago Press, 1910.—pp. 48. $0.53.

Letters to His Holiness Pope Pius X. By A MODERNIST. Chicago, The Open Court Publishing Co., 1910.—pp. xx, 280.

Immanuel Kant. Von E. VON ASTER. Leipzig, Quelle und Meyer, 1909.—pp. 136. M. 1.25.

Die Stelle des Bewusstseins in der Natur. Von JULIUS PIKLER. Leipzig, Johann Ambrosius Barth, 1910.—pp. 34.

Über Theodor Lipps' Versuch einer Theorie des Willens. Von JULIUS PIKLER. Leipzig, Johann Ambrosius Barth, 1908.—pp. viii, 50.

Zwei Vorträge über dynamische Psychologie. Von JULIUS PIKLER. Leipzig, Johann Ambrosius Barth, 1908.—pp. 26.

Das Beharren und die Gegensätzlichkeit des Erlebens. Von JULIUS PIKLER. Stuttgart, Franck'sche Verlagshandlung, 1908.—pp. 40.

La démocratie politique et sociale en France. Par ALFRED FOUILLÉE. Paris, Félix Alcan, 1910.—pp. viii, 218.

Esquisse d'une science pedagogique. Par LUCIEN CELLÉRIER. Paris, Félix Alcan, 1910.—pp. xiv, 393.

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SUMMARIES OF ARTICLES.

[ABBREVIATIONS.—*Am. J. Ps.* = *The American Journal of Psychology*; *Ar. de Ps.* = *Archives de Psychologie*; *Ar. f. G. Ph.* = *Archiv für Geschichte der Philosophie*; *Ar. f. sys. Ph.* = *Archiv für systematische Philosophie*; *Br. J. Ps.* = *The British Journal of Psychology*; *Int. J. E.* = *International Journal of Ethics*; *J. of Ph., Psy., and Sci. Meth.* = *The Journal of Philosophy, Psychology, and Scientific Methods*; *J. de Psych.* = *Journal de Psychologie*; *Psych. Bul.* = *Psychological Bulletin*; *Psych. Rev.* = *Psychological Review*; *Rev. de Mét.* = *Revue de Métaphysique et de Morale*; *Rev. Néo-Sc.* = *Revue Néo-Scolastique*; *Rev. Ph.* = *Revue Philosophique*; *Rev. de Ph.* = *Revue de Philosophie*; *R. d. Fil.* = *Rivista di Filosofia e Scienze Affini*; *V. f. w. Ph.* = *Vierteljahrsschrift für wissenschaftliche Philosophie*; *Z. f. Ph. u. ph. Kr.* = *Zeitschrift für Philosophie und philosophische Kritik*; *Z. f. Psych.* = *Zeitschrift für Psychologie und Physiologie der Sinnesorgane, I. Abtl.: Zeitschrift für Psychologie.* — Other titles are self-explanatory.]

Liebmann als Erkenntnistheoretiker. ERICH ADICKES. Kant-Studien, XV, pp. 1–52.

Epistemological problems occupied the focus of Liebmann's attention throughout his philosophical career. This led him as early even as 1865 to take a hostile attitude toward metaphysical dogmatism. In many respects his interests were similar to those of Haeckel, yet his conservative temper and his analytic methods were in utter contrast to the boldness and blindness of the latter's procedure. In his writings, Liebmann investigates the presuppositions of his doctines, bearing in mind the specific nature of his problems, and raising questions regarding the limitations, the objective validity, and the degree of certainty of human knowledge. He makes a sharp distinction between fact and interpretation, between the given element in experience and that which has its source in reason. He insists that a scientific metaphysics of transcendent reality is impossible and that such speculations must remain a matter of subjective belief or faith. Critical metaphysics, however, or an investigation of the various doctrines that are advanced regarding the essence and ultimate ground of reality is both possible and necessary. He bitterly attacks Kant's conception of things-in-themselves and subjects many other of his doctrines to criticism, even though he maintains that Kant's achievements are both original and important and that they will prove to be imperishable. Kant took as his starting-point not the soul, the brain, a *tabula rasa*, or a Leibnitzian monad but consciousness itself, seeking the necessary presuppositions of all experiences; he demonstrated that knowledge is limited to experience and that it reveals only a phenomenal world. Liebmann argues that neither subjective idealism nor any doctrine of immanence can prove that there is no reality independent of the representative subject, because they cannot transcend the limits of the representations of the subject. In spite of his polemic against things-in-themselves, Liebmann is

firmly convinced that there is an absolutely real world (*mundus intelligibilis*) which lies beyond our world of knowledge (*mundus sensibilis*). By *à priori* we mean those functions of mind which are necessary presuppositions of our knowing a world. Kant rightly insists that these cannot be regarded as grounded in a spiritual substance, because this latter conception is itself the product of a consciousness which presupposes these forms. The *à priori* has a "metacosmic" significance as constitutive of experience, even though it may also be regarded as psychological, since the experience is that of human minds. Though not always consistent in his statements, Liebmann tends to regard the transcendental ego as an over-individual unity of consciousness that comprehends in itself the consciousness of finite individuals. Thus he leaves the firm ground of given experience for metaphysical speculation, and advances a doctrine which is open to criticism. Adickes contends that the transcendental ego is not distinct from the individual ego, but that it is the rational organization of the human mind whose metaphysical nature we can never know but which, under the influence of the absolutely real, creates for us, our world of experience. Liebmann is inclined to the view that space and time are not only *à priori* but also transcendentally ideal. He confesses, however, that the latter does not necessarily follow from the former and is, indeed, ultimately a matter of personal conviction rather than of proof. His interest in metageometrical investigations is, nevertheless, due to the fact that he believes to find in them a support for his own metaphysical doctrines. Such investigations, Adickes insists, are entirely irrelevant, and might equally well be interpreted as proving transcendental realism. Although we necessarily perceive objects as existing in 'Euclidean' space, we cannot prove either that this is a purely subjective form of perception or that certain objectively real conditions, unknown to us, make it impossible that there be a different space. If we regard that which is logically contradictory and unthinkable as real, why not assert the same with regard to our manner of perception and thus conclude that Euclidean space is transcendentally real? Space and time, Liebmann argues, are *à priori* because there is a characteristic necessity and universality attaching to the axioms of geometry. Starting with the undeniable fact of a feeling of certainty, he investigates the conditions under which this occurs and the objective validity that may be ascribed to it. How can we explain the immediate consciousness that our perceptions can never contradict the axioms of geometry and the fact that our subjective convictions receive objective confirmation? The writer points out his fundamental agreement with Liebmann as regards the validity of the analytical laws of thought of formal logic and the principles of mathematics and algebra. He disagrees, however, in his interpretation of the feeling of certainty that attaches to geometrical axioms which purport to reveal not the laws of thought but the characteristics of objects of perception. Liebmann bitterly opposes empiricism because he believes it to be incompatible with apriorism, yet he points out that we must carefully distinguish between: (1) the fact that if space and time are *à priori* we must necessarily perceive the world according to these forms, and (2) the

consciousness or knowledge of the validity of the forms and peculiarities of space and time. The latter alone can be the ground of our conviction of the apodictical certainty of geometrical axioms, and it is this alone that the empiricist insists must be derived from experience. To solve the problem, we must analyze the feeling of certainty. It includes two elements: (1) the conviction that I must regard certain geometrical principles as necessary; (2) the conviction that this feeling of necessity must be universal. Empiricism alone, Adickes maintains, can explain the latter element. Sensations must be spatially determined, we must objectify or externalize them, otherwise we could have no outer world at all but only certain psychical changes; the laws and characteristics of space, however, we can learn only from experience. Liebmann insists that experience can never be explained on the basis of the merely given, but that there must be certain principles which we regard as valid, and which we apply beyond the limits of actual or possible observation. Since these principles serve as connections between data that are essentially isolated, he calls them interpolation maxims. He mentions four: the principles of real identity, of continuity of existence, of causality, and of continuity of occurrence. Adickes agrees in the main with Liebmann's contention but points out that these principles have their source in the mental power of abstraction, synthesis, comparison, etc., and adds two further maxims: (1) the acknowledgment of other independent selves; (2) the conviction that we have a common sense world with them.

EDWARD L. SCHAUB.

The Religion of the Future. CHARLES W. ELIOT. Harvard Theol. Rev., II, 4, pp. 389–407.

On the negative side it may be said that the religion of the future will not be based on any authority, either spiritual or temporal; it will not be a personification of the primitive forces of nature; it will tolerate no worship of ancestors or rulers; its primary object will not be the personal welfare of the individual in this world or the next; it will not be propitiatory, sacrificial, or expiatory; it will not accept the crude Hebrew conception of God; and, finally, it will be neither gloomy nor ascetic.

On the positive side the most fundamental element in the new religion will be the new conception of the nature of God. This will comprehend in one Being the Jewish Jehovah, the Christian universal Father, the modern physical conception of omnipresent and exhaustless Energy, and the biological conception of a vital force. God is immanent in the whole universe, and especially in the consciousness of man. With reference to the question of future compensation the author answers that the religion of the future will have in it no elements of the supernatural. Indeed, he asserts that the consolations of ordinary Christianity no longer satisfy people who have their lives broken by the loss of friends. The new religion will seek to better all the conditions of life, and so will diminish the number of such bereavements; it will no longer look upon pain as expiatory, but will seek to banish it in as far as possible; and for ills that must be borne it will offer the consolation that the sufferer

may be rendered tenderer and more serviceable to humanity; but it will no longer place reliance upon the hope of rewards in a future Heaven. In short, the new religion will foster the sentiment of love and will inspire in men the spirit of coöperation with their fellows and with God for the good of humanity here and now.

As regards its progress the new religion will work in the main through channels already prepared; it will, for example, continually modify and exalt the creeds and practices of existing churches and will tend to unite them upon the two fundamental doctrines of an immanent and loving God and of serviceableness to the race. Thus the new religion will harmonize with the fundamental teachings of Jesus as well as with all the modern movements for the improvement of society. C. H. WILLIAMS.

What is Vital in Christianity? JOSIAH ROYCE. Harvard Theol. Rev., II, 4, pp. 408–445.

The first question arising in a discussion of the essentials of religion is: Which is the more vital to a religion, its religious practices or its religious beliefs? The answer is that in the simpler and more primitive religions the practices seem the more vital; in the higher religions, the beliefs. It is sometimes contended that upon the highest plane of religious consciousness what is vital is neither the one nor the other but the union of the two. Even if this answer be accepted, Professor Royce maintains, it still remains to assign a concrete content to this conception. In the case of Christianity, he says, two opposing solutions are given to this problem of content—the one that what is vital is the doctrine of Christ as it appears in his teachings and parables and as he lived it out in his life; the second, that what is vital consists in regarding the life of Christ as part of a divine plan for the redemption of the world. The first of these, according to Professor Royce, is fully intelligible only when it is taken in connection with and as dependent upon the second; for the work of Christ looks beyond itself for an explanation. The only adequate explanation is to be found in the doctrines of the Incarnation and the Atonement. These doctrines, which are essential elements in the conception of Christianity as a religion of redemption, are capable of interpretation in the light of reason as symbols of deep spiritual truths. The Incarnation means that God manifests himself in the world and wins perfection by expressing himself in finite life and in triumphing over its finitude; the Atonement signifies that we win our union with God by triumphing over evil, and that this process is never accomplished alone but with and for each other. Moreover, in the sorrow of man God sorrows, and our final fulfilment is the triumph of God himself.

C. H. WILLIAMS.

May a Realist Be a Pragmatist? W. P. MONTAGUE. J. of Ph., Psy., and Sci. Meth., VI, 17, pp. 460–463; 18, pp. 485–490; 20, pp. 543–548; 21, pp. 561–571.

Professor Montague compares realism and pragmatism with the purpose of discovering whether they are implicative of one another, incompatible, or

neutral. Realism he defines as a doctrine that objects can exist regardless of any consciousness; it does not commit one to materialism or spiritualism, empiricism or apriorism, monism or pluralism, a static or dynamic view of reality. In defining pragmatism he discusses the biological, psychological, humanistic, and logical theories. In regard to the biological, which declares thinking to be evolved when needed, he asks: Does it presuppose an objective world independent of our cognitive experience and antedating that experience? Does it make necessary any new, subjectivistic criterion for evaluating the truth of a judgment? Does it restrict the legitimate application of our thought to the subjectivistic realm of desire and experience? The first question he answers affirmatively. As to the second, there is no reason why a new theory of the origin and evolution of thought should demand a new criterion as to the truth of the judgments formed. The objective nature of what is thought about will determine how it is to be thought about. We test the truth of a judgment by comparing the fact asserted with the same fact identically experienced or by ascertaining its consistency with other judgments whose truth has been tested previously. The third question is answered negatively. The origin of thought does not determine its content. Thus a realist may be a pragmatist of the biological type. Psychological pragmatism asserts that the truth of a belief is identical with its verification. But how could there be a belief leading to its own successful confirmation except by being an antecedent agreement with the objects experienced? The pragmatist replies that this antecedent conformity is only the possibility of verification. But there is no mere possibility, the potentiality of the verification experience must be an actual relation between the thing believed and the thing that exists. Truth is not identical with verification. The difficulty lies in the confusion of *ratio essendi* and *ratio cognoscendi*. The verification of a belief is our only ground for knowing it to have been true but not the only ground for its truth. The pragmatist fails to recognize any other objective truth than the absolutistic, while the realist holds that it may be self-existent, but yet a relation that can be experienced between things that are believed and things that exist. A realist can never be a psychological pragmatist. In regard to humanism, its realistic implications depend upon the interpretation of its theories. These the author gives as two: What world we shall know is determined by our specifically human faculties; and the world that we come to know is the real world. The subjectivistic interpretation asserts that nature is plastic; generations have reacted cognitively to it, moulding it to human needs. But what about the specific facts of the world? Are the forms of the world the product only of the human race or of all races? To assume that psychophysical organisms, by means of their cognitive reactions, created time and space, in which those reactions occurred, seems contradictory. The answer to the question, "May a realist be a pragmatist of the humanistic type," is a qualified affirmative. For logical pragmatism, there are no realistic implications; it is an ambiguous theory, lacking empirical verification, and of dubious value.

CORRINE STEPHENSON.

Paradoxes in Natural Realism. BERNARD C. EWER. J. of Ph., Psy., and Sci. Meth., VI, 22, pp. 589–600.

A prevalent notion, much in need of examination, is that realism is involved in the fatal paradox that an object can be objectively both in consciousness and out of it at the same time. Now while consciousness is formally objective, the object perceived is manifestly not in two parts of the same real space, for it cannot be shown that the facts of consciousness appear in real space. The remaining paradox may be dissolved by showing that the object in consciousness is not the same as the external object. Various theories, such as "radical empiricism," attempt to eliminate this apparent dualism. (*A*) Criticism of things as "independent of cognition" is typified by Professor Royce's discussion of "independent beings." By proving the impossibility of complete independence, he illogically infers that of relative independence. Relative independence of the real, means whatever non-mental characteristics we critically discover in it; it is much more than merely knowable. That ultra-microscopic facts are some being's experience, is a non-intuitive, philosophical assumption. Since the degree of independence varies greatly, realism and idealism tend to merge. (*B*) The paradox centers around the terms: content, imagery, awareness, and meaning. Realism may tenably identify the terms. The paradox arising from 'content of consciousness' disappears if we distinguish between real object and formal objectivity. For the sake of clearness, 'content' should always mean mental content, while 'object' should not refer to anything in consciousness. (*C*) The objection that cognition is partly true and partly false (from subjectivity), both cognitive and non-cognitive at the same time, sounds like a contradiction, but corresponds precisely to the fact of our imperfect judgments. There is no contradiction unless truth and falsity both belong to the same part of the percept. As realism is at present formulated, it is incomplete: but in its insistence upon certain fundamentals of experience, it is not self-contradictory.

G. W. PORTER.

Energétique et sociologie. E. DE ROBERTY. Rev. Ph., XXXV, 1, pp. 1–38.

This article is a review and criticism of Ostwald's book, *Die energetischen Grundlagen der Kulturwissenschaft.* The author of the book belongs to a notable group of scientists who have greatly modified our ideas of matter and force. It was formerly held that logic differed in its laws from physics, chemistry, etc. and was more stable. We now know that if other sciences develop, so does logic, but more slowly. The most recent proof of this is found in the theory of energy. The concept of energy was first introduced in physics but has gradually spread to chemistry, biology, and sociology. The application of the same laws to all science makes all knowledge continuous. Energy is the equivalent, not only of substance, but also of cause. Ostwald claims for his theory that it does away with the dualism of older science by supplying a higher category which includes matter and force. There are certain laws or universal principles which the new logic extends to all orders

of phenomena. (1) Conservation of Energy, which corresponds to the logical principle of identity and metaphysical persistence of being. (2) Transformation of energy, in which some part always persists in its original form. This corresponds to the old law of plurality of effects and persistence of cause. (3) That A, the original energy, is always larger than B the new form. This is another form of the law that the cause includes its effect. (4) That if A equals free energy, and B, the effect, equals transformed energy, the teleological relation B/A is always a fraction. (5) As our knowledge of the properties of A and B increase the value of the fraction approaches unity. This is the formula of indefinite progress. (6) Increase and decrease of the fraction B/A is governed by the most general laws, which include those of intensity, temperature, pressure, tension, atomic weight, assimilation, dissimilation, and others. (7) When energy becomes active there is also dissipation of free energy. There is a fallacy here, however. If these laws apply to the physical, chemical, and biological modes of energy, which are simple, we cannot say that they apply to the sociological mode which is complex. Ostwald claims that man is raised above the lower animals by cerebral force alone without the intervention of any process of socialization. This is the affirmation of an effect without the cause. Man has a theoretically unlimited possibility of transforming any kind of energy into any other kind, and this is the essence of progress. The utilization of the phenomena of the outer world presupposes a knowledge of these phenomena, and this presupposes a social factor, for all knowledge is a social product—it depends on the sharing of ideas and their perpetuation beyond the life of the individual. Articulate language is the essential instrument of the socialization. From one point of view, Ostwald is justified in deriving right from force because it precedes it in time; but teleologically right is superior. The right to punish is a manifestation of right in general because it prevents loss of energy. From this point of view war and all struggle, economic or otherwise, is to be classed with crime. The idea of property arises from the primitive appetites of men. It is at first limited to a small number of objects but is later extended to include the means of production. The longer and more difficult the road in time or space between free and transformed energy, the more highly is the idea of property developed. Power retained by the state is the greatest concentration of human energy so far realized. The evolution of the state has already passed through two stages, the feudal and the economic. In order to protect itself against the menace of organized capital, the economic state ought to become the one capitalist. Science is the instrument of superiority and the flower of culture. Scientific research should come under the law of economy of effort.

HELEN M. CLARKE.

Biologie et transformisme. H. DRIESCH. Rev. de Ph., IX, 11, pp. 481–500.

This article, although containing new material, reproduces, in large part, certain chapters of *The Science and Philosophy of the Organism*, which contains the "Gifford Lectures" delivered by the author at the University of Aberdeen.

It is here maintained that every rational system should be founded on a concept, by the aid of which all the specific differences might be rendered intelligible. Otherwise it is a mere catalogue. To this latter type belongs the present system of classification in biology. On the one hand, the data of geographical and paleontological distribution, on the other, the gradation of resemblances and differences among living beings, point to a common descent. But a hypothesis of descent only 'explains' resemblances in the sense that it refers them to a single principle, namely, heredity, leaving, moreover, in its entirety, the problem of the differences and their systematic classification. Without knowledge of the law of transformation, the simple theory of descent leaves the problem of rational classification practically where it finds it. Witness the fact that at least six distinct theories have been confidently offered to account for the origin of the vertebrates. It is probable that, at some future time, an analysis of the causal factors in descent will lead to an explanation of the past history of organisms, in accordance with the principle of a truly rational system. The two great theories of descent attribute the origin of every specific differentiation to chance, Darwinism according to the inheritance of fortuitous variations, by means of natural selection, Lamarckism according to the inheritance of accidentally acquired characters. Neither theory is able to explain the origin of new organs, the correlation of parts, the harmony between different individuals, as, for example, those between the two sexes, or between insects and flowers, characters of pure systematic organization, and such phenomena as the power of regeneration—in short, the deep-seated likeness which organisms always present in spite of specific differences. These two theories of tranformism have shown that systematic differences in quality, intensity, or number, may perhaps have been produced on the basis of habitual variability. The Darwinian theory is of value as a hypothetical explanation of the elimination of the individuals not possessing the character in question. The Lamarckian theory hypothetically explains inner histological adaptivity, through the inheritance of acquired characters. The sole serious basis of transformism, the concept of mutations, cannot serve as the foundation of a rational system, as its standing has been greatly shaken by the later researches. The conception of a rational, systematic arrangement loses its fundamental signification, as applied to both Darwinism and Lamarckism, since both attribute to chance the specific forms of organisms. The unknown principle of transformism should be attached, not to the materials of the development, but to the entelechy, the "essential form." A task of future biology would be to discover, beneath dissimilarities, apparently having no rationality, the truly rational system.

J. RAYMOND TUTTLE.

Autour du problème de la connaissance. A. CHIDE. Rev. Ph., XXXIV, 12 pp. 581–604.

The Aristotelian logic assures us that, whatever the matter of knowledge may be, the form must ever remain the same. Mental pathology has reduced

the pride of formal logic. In spite of this, however, intellectualism has not altogether renounced its extravagant pretensions, attributing to itself a knowledge of the very essences of the cosmos. In the time of DesCartes, skepticism succeeded in forcing intellectualism to admit that God only could pass from thought to being. This stronghold was finally overthrown by Kant in his refutation of the ontological argument. In this day the very last retreat, that of mathematics, has been seized by the neo-geometers. Intellectual knowledge is then avowedly disproportionate to the real. Must we on that account despair of ever knowing 'the truth and the life'? May there not be some powers of knowing which have atrophied by the over-development of the intellectual faculties? Many have claimed such knowledge. The visions of Swedenborg were ridiculed by Kant as morbid hallucinations. Kant's error was in spending too much time on the mystic's alleged double vision, and not enough on his affirmed supernatural communication. Mystic knowledge differs from intellectual knowledge in kind not in degree, and to seek to found the former on the latter is to misconceive both. Certain semi-mystics hope to escape the reproach of intellectualism by the use of symbols. There may be an undeveloped sense in us similar to the sense of orientation or magnetism, in the expression of which it might be unnecessary to use symbols, were it not for the fact that humanity is already saturated with intellectualism. There is still another mode of knowledge beside the intellectual and the mystic, namely, the instinctive, which like the mystic knowledge is beyond the hazards of evolution. It is also like mystic knowledge in that it is dwarfed and atrophied by the disproportionate development of our intellectual nature. The difference between instinct and intelligence is, again, one of kind not of degree. No symbols or other subterfuges can bring them together. Intelligence perceives relations, determines forms, and abstracts from life while instinct implies 'things' and dwells in life. The two words 'tact' and 'tactique' suggest a residue of instinctive knowledge in man, persisting in spite of the exaltation of the intellect. These words refer particularly to social relations rather than to the instinctive functions such as slaughter and generation. The three above mentioned modes of knowledge co-exist in each of us but they are unequally developed, thus making the human being very complex.

HARVEY G. TOWNSEND.

L'influence de l'habitude sur les sentiments. EUGÈNE MARTIN. Rev. Ph., XXXV, 4, pp. 402–412.

It is a common theory that emotions are dulled by habituation. Let us reconcile this, if possible, with the counter-theory that "emotion tends to produce susceptibility of emotion." The strength of the emotion corresponds to the keenness of the need satisfied. It should be weak as the satisfied need is weak. That this is not always true, however, is accounted for by a number of laws of habituation, in the deduction of which we shall confine ourselves to particular emotions and not emotion in general. Sensations may be weakened by prolongation and repetition; emotions, by prolongation only. The

first explanatory law is the law of imaginative vision: imagination may modify the image of perception and hence, the affective tone. The second is the law of surprise: the difference between expectation and realization modifies the emotion. The third is the law of fatigue: the dulling influence of fatigue may be avoided indefinitely by repose or change of stimuli. There are pleasures which seem dead but which merely need intellectual and emotional reinforcement. Fourth and most important is the law of attention: an emotion may be indefinitely diminished if attention is repeatedly directed away to some other element of the experience. That the diversion of attention is responsible, is shown by the fact that by attention to the feelings the emotion may be preserved. These laws must be regarded as distinct. Just as more painful and more violent sensations must become dulled by repetition, while the mild and agreeable need not, so emotions, if desirable, may be nourished. The causes of the weakening of these undesirable emotions seem to be the facts stated in our four laws. Emotional decline is due especially to diverted attention. The practical conclusion to be drawn is that the dulling and, likewise, the reinforcing of emotions is not an automatic process but is subject to voluntary control.

G. W. PORTER.

Christian Morals and the Competitive System. THORSTEIN VEBLEN. Int. J. E., XX, 2, pp. 168–185.

The morals of Christianity and the competitive system both seem to be vitally bound up with our western civilization. Taken at their best, must they be regarded as mutually supplementary or as contradictory and mutually inhibitive? "The question of their consistency with one another or with the cultural scheme in which they are involved, turns into a question as to the conditions to which they owe their rise and continued force as institutions." If they "are the outgrowth of the same or similar lines of habituation, there should presumably be no incompatibility or discrepancy between them, otherwise it is an open question." The essential principles of Christian morality are non-resistance (humility) and brotherly love. The latter appears so universally among even savage tribes that it appears to be an elemental trait of the species rather than a cultural product of Christendom. The former seems to be, in the main, original to Christianity, but the ready acceptance it met with argues that mankind was prepared for just such a principle of conduct. No doubt the force of its appeal was due largely to the protracted experience of defeat and suppression under the Roman rule. On the whole, it may be said that "these elements of the moral code which distinguish Christianity from the ethnic cults, are elements of the morals of low life, of the subject populace." The principles underlying pecuniary competition are those of natural rights, so that the period of their growth is coincident with the atomistic, egoistic philosophy of the eighteenth century. The mediæval institutions with their chivalric canons of destructive exploit gave way to the industrial institutions with the more sordid canons of workmanlike efficiency

and pecuniary strength. Yet "modern culture is fully as much shaped and guided by considerations of livelihood, as by the ideals of differential gain." Since the individualism of the modern era sets out with industrial aims, and the individual relations under this system take the pecuniary form, "the individualism thus worked out and incorporated in the modern institutional fabric, is a pecuniary individualism, and is therefore also typically egoistic." Conditions are changed. "The excellence and sufficiency of an enlightened pecuniary egoism are no longer a matter of course," and it is not at all likely that it can long remain effective. Christian morals and the competitive system, therefore, represent the institutional by-products of two different cultural situations, the former arising out of the oppressed condition of the masses and the latter out of habits of thought induced by the exigencies of vulgar life under the rule of handicraft and petty trade. The Christian principle of humility has been virtually eliminated from modern morality. The principle of brotherly love or mutual succor seems, in its elements at least, to be a culturally atavistic trait and finds its natural rights analogue in that of fair play. While the latter is hardly a competent expression of the Christian principle, it is in fact supplemented by an "impulsive approval of whatever conduct is serviceable to the common good and in the disapproval of disserviceable conduct even within the limits of legality and natural right." Under the conditions in which it arose, the rights of ownership made for equality, and was therefore not inconsistent with the ancient bias in favor of mutual aid and human brotherhood. Since, however, business has become largely an impersonal investment for profit, the principles of fair play and pecuniary discretion have, in great measure, lost the sanction once afforded them by the human propensity for serviceability to the common good. "Except for a possible reversion to a cultural situation strongly characterized by ideals of emulation and status, the ancient racial bias embodied in the Christian principle of brotherhood should logically continue to gain ground at the expense of the pecuniary morals of competitive business."

EDWARD L. SCHAUB.

La morale positive. CH. DUNAN. Rev. de Met., XVIII, 1, pp. 37–78.

In this article the writer selects for special treatment the views of MM. Durkheim and Belot, as representative of the so-called scientific or positive point of view in ethical theory. Durkheim and Belot apparently agree on three important points: (1) that morality should be rational, (2) that it should be imperative, (3) that it should make man fit for social life, *i. e.*, that moral precepts should have for their object the adapting of man to the conditions of life which society imposes upon him. Durkheim would have the right of moral command vested in society; and he regards 'society' as a personality qualitatively different from the individual personalities composing it. Belot refuses to accept such a 'society' with a morally imperative power; but he recognizes in man a 'fundamental volition,' which he regards as his ultimate duty. The opposition between the two positions thus consists in the fact that Durkheim

attributes to society the right to regulate the individual's acts, whereas Belot reserves this right for the individual himself. Dunan, criticising Durkheim's ethical theory, finds his conception of society as organic to be quite consistent. In the same way, Belot's insistence upon the necessity of an inner basis for moral obligation is not open to much destructive criticism. But the two theories present an antinomy which cannot be solved without the aid of a metaphysic. The autonomy of the moral individual and the moral authority of society would be irreconcilable otherwise. But, in the first place, what is meant here by 'society'? Is it the state, or the immediate tribal milieu, or one's town community, or party, or nation, or religious sect? In case of disagreement between the demands of these, where should the power of authority be believed to reside? This point is left very much in the dark in the 'positive' ethics. Again, it is quite inconsistent to believe that all virtues make us sociable and all vices unsociable, if one takes the terms 'sociable,' 'unsociable' in a merely empirical sense. In our society there are virtues that are vices and *vice versa*. Society merely furnishes the proper milieu for the development of the moral life: it does not create the moral life. Morality has its basis in the very nature of man. The validity of Durkheim's theory depends upon the conception of 'society.' If one recognizes the essentially ideal basis of the social order, then its development involves the moral perfecting of its members; but if one deprives society of this idealistic basis and treats it 'positively,' then its 'morality' degenerates into mere external forms of action. Dunan points out at length that the theory of Durkheim can become consistent only when one admits the idealistic interpretation of the social order, as essentially rational, as the Absolute. And this idealizing of society, Dunan thinks, follows necessarily from Durkheim's fundamental principles. In a similar way, Belot's *vouloir fondamental* cannot be mere empirical volition. It involves the rational nature of man. Ethics cannot be based merely upon the positive principles of empirical science; it involves metaphysics. One is thus reduced to two alternatives: we must either adhere to merely empirical methods in ethics, and, giving up the quest for a theory of morality, being satisfied with a science of *mœurs;* or we must preserve real morality by recognizing the inevitableness of metaphysical considerations in any truly ethical inquiry.

R. A. TSANOFF.

NOTES.

The fourth International Congress of Philosophy will be held at Bologna during the Easter holidays of 1911. The president of the congress is Professor Federigo Enriques, and the General Secretary, Professor Gulio Cesare Ferrari. All communications for the Congress must be sent to the General Secretary (Bologna, Piazzi Calderini 2) before January 1, 1911. Communications may be made in English, French, German or Italian.

Professor John Watson has been appointed Gifford Lecturer at the University of Glasgow; and at the beginning of the next academic year he will deliver the first half of a series of lectures, which will be completed in the following year.

Professor Arthur O. Lovejoy has been called from the University of Missouri to the chair of philosophy in Johns Hopkins University. The vacancy at Missouri caused by Professor Lovejoy's resignation has been filled by the appointment of Professor A. K. Rogers, of Butler College, who in turn is to be succeeded at the latter institution by Professor Edmund H. Hollands, at present *locum tenens* in philosophy at Hamilton College.

We give below a list of the articles, etc., in the current philosophical periodicals:

THE HIBBERT JOURNAL, VIII, 3: *M. Loisy*, Remarques sur le volume "Jesus ou le Christ"; Translation of M. Loisy's Article; *J. A. Thompson*, The Three Voices of Nature; *Michael Sadler*, The Two-Mindedness of England; *Henry Jones*, The Ethical Demand of the Present Political Situation; *Gerald Balfour*, Psychical Research and Current Doctrines of Mind and Body; *Vida Scudder*, Christianity in the Socialist State; Concerning Imprisonment; *Lady Welby*, The Message of Paul to the Present Age; *W. Manning*, The Revision of the Book of Common Prayer; *R. B. Perry*, The Futility of Absolutism; Moslem Sermons preached in Constantinople.

THE AMERICAN JOURNAL OF PSYCHOLOGY, XXI, 2: *Sigmund Froud*, The Origin and Development of Psychoanalysis; *C. G. Jung*, The Association Method; *William Stern*, Abstracts of Lectures on the Psychology of Testimony and on the Study of Individuality; *Ernest Jones*, Freud's Theory of Dreams; *S. Ferenczi*, The Psychological Analysis of Dreams; Psychological Literature; Book Notes.

THE PSYCHOLOGICAL REVIEW, XVII, 3: *Knight Dunlap*, The Complication Experiment and Related Phenomena; *A. S. Ford*, The Pendular Whiplash Illusion; *June E. Downey*, Judgments on the Sex of Handwriting; *M. L. Billings and J. F. Shepard*, The Change of Heart Rate with Attention.

THE PSYCHOLOGICAL BULLETIN, VII, 4: *Ernest Jones*, Freud's Psychology; Psychological Literature; Books Received, Notes and News.

VII, 5: *E. J. Swift*, Learning to Telegraph; Psychological Literature; Discussion; Books Received, Notes and News.

THE MONIST, XX, 2: *C. H. Cornill*, Moses; *Charles Johnston*, The Dramatic Element in the Upanishads; *G. O. Warren*, A philosophical Aspect of Science; *Editor*, The Rock of Ages; *E. S. Ames*, The Psychological Basis of Religion; *Bernhard Pick*, The Followers of Jesus in the Talmud; Criticisms and Discussions.

THE JOURNAL OF PHILOSOPHY, PSYCHOLOGY, AND SCIENTIFIC METHODS, VII, 8: *A. C. McGiffert*, The Pragmatism of Kant; *W. B. Pitkin*, Some Neglected Paradoxes of Visual Space. IV; Discussion; Societies; Reviews and Abstracts of Literature; Journals and New Books; Notes and News.

VII, 9: *W. B. Pitkin*, James and Bergson: or, Who is against Intellect?; *J. A. Leighton*, On Continuity and Discreteness; Societies; Reviews and Abstracts of Literature; Journals and New Books; Notes and News.

VII, 10: *Edmund Jacobson*, The Relational Account of Truth; *H. S. Shelton*, On Methods and Methodology; *W. F. Cooley*, Contingency in an Infinite World; Reviews and Abstracts of Literature; Journals and Abstracts of Literature; Journals and New Books; Notes and News.

VII, 11: *G. A. Coe*, Borden Parker Bowne; *J. S. Moore*, The System of Values; *Archibald Alexander*, The Paradox of Voluntary Attention; Societies; Reviews and Abstracts of Literature; Journals and New Books; Notes and News.

ARCHIV FÜR GESCHICHTE DER PHILOSOPHIE, XVI, 3: *R. Philippson*, Die Rechtsphilosophie der Epicureer; *Leo Jordan*, Pars Secunda Philosophiæ, seu Metaphisica; *A. Redlich*, Die 'Απόφασις des Simon Magus; Jahresbericht.

VIERTELJAHRSSCHRIFT FÜR WISSENSCHAFTLICHE PHILOSOPHIE, XXXIV, 1: *Karl Marbe*, Beiträge zur Logik; *Hans Kleinpeter*, Die Phänomenologische Naturanschauung; *Paul Barth*, Die Geschichte der Erziehung in soziologischer Beleuchtung, XII; Besprechungen.

ZEITSCHRIFT FÜR PSYCHOLOGIE, LV, 5 u. 6: *Th. Wagner*, Bibliographie der deutschen und ausländischen Literatur des Jahres 1908 über Psychologie; Namenverzeichnis der Bibliographie; Namenregister.

LVI, 1 u. 2: *H. Ohms*, Untersuchung unterwertiger Assoziationen mittels des Worterkennungsvorganges; *S. Witasek*, In Sachen der Lokalisationsdifferenz; *W. Sternberg*, Geschmack und Sprache; Literaturbericht.

REVUE PHILOSOPHIQUE, XXXV, 4: *Pierre Janet*, Une félida artificielle; *Dr. Jankélévitch*, La mort et l'immortalité d'après les données de la biologie; *Richard Foy*, L'existence et le fondement des lois du hasard; *E. Martin*, Influence de l'habitude sur les sentiments; Analyses et comptes rendus; Revue des périodiques étrangers.

XXXV, 5: *Rogues de Fursac*, Les causes de l'avarice; *H. Beaunis*, Le mécanisme cérébral; *Pierre Janet*, Une félida artificielle; Analyses et comptes rendus; Revue des périodiques étrangers.

REVUE DE PHILOSOPHIQUE, X, 4: *P. d'Hérouville*, La vertu et le juste milieu: *Ch. Huit*, L'absolu; *J.-M. Darlo*, Revue critique de cosmologie; Enseignement philosophiques; Analyses et comptes rendus.

X, 5: *A. Müller*, Quelques problèmes de logique et d'histoire de la logique —I. Kant; *Ch. Huit*, L'absolu; *G. Michelet*, Revue critique de morale; *X. Moisant*, Le devoir est-il une superstition?; Analyses at comptes rendus.

REVUE DE MÉTAPHYSIQUE ET DE MORALE, XVIII, 2: *É. Boutroux*, Hasard ou liberté?; *B. Brunhes*, L'objectivité du principe de Carnot; *F. Le Dantec*, Il y a fagots et fagots; *H. Daudin*, F. Rauh: sa psychologie de la connaissance et de l'action; *L. Weber*, "Devoirs," par B. Jacob; Variétés; Questions pratiques.